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ABSTRACT

This guide is intended to assist individuals (including deans, department heads, project directors, supervisors of inservice education, and directors of professional development) who are responsible for organizing and/or administering performance-based instructor training programs. The concept of performance-based teacher education/competency-based staff development (PBTE/CBSD) is examined in the first chapter. Chapter II covers the following aspects of changing to PBTE/CBSD: implementation barriers, the basis for changes, the change process, instructional materials, facilities (the resource center), and program costs. The following aspects of college and university PBTE programs are discussed in Chapter III: selection of competencies; implementation patterns; program staffing; grades, credits, and recordkeeping; and teacher certification. Chapter IV, which is devoted to institutional CBSD programs, covers the following topics: selection of competencies, provision for career ladders, participant motivation, university/institution collaboration, and program management. An appendix includes descriptions of eight PBTE/CBSD programs from around the country. (MN)

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Implementation Guide . . .

for Performance-Based Teacher Education & Competency-Based Staff Development Programs

Second Edition

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FOREWORD

After an intensive program of research and development by the National Center for Research in Vocational Education, a set of performance-based teacher education (PBTE) materials was developed, and a guide was prepared to help those implementing programs using a PBTE approach and the National Center's PBTE materials. Since the first edition of the guide was published in 1977, many such programs have been implemented, and a new acronym was born: when the PBTE materials were used by local secondary and postsecondary schools for staff development purposes, the programs were called competency-based staff development, or CBSD, programs.

This second edition of the *Implementation Guide* includes material from the original guide that passed the test of time, as well as new material drawn from the experiences of those who have actually implemented a PBTE or CBSD approach. The guide attempts to present and deal with the major concerns of all those responsible for evaluating, installing, and maintaining a PBTE/CBSD program. In systematic fashion, it describes the requirements for an optimal PBTE or CBSD program and presents possible solutions to problems that typically must be addressed. Wherever feasible, alternatives are given that may be adopted or adapted to suit a wide diversity of educational settings. The second edition also includes descriptions of model PBTE/CBSD programs from which implementers may draw as they design their own program approaches.

Among those people who may find the materials in this document helpful are heads of teacher education departments, deans of teacher education programs, PBTE/CBSD program coordinators, directors of secondary and postsecondary staff development programs, and PBTE/CBSD resource persons. Though prepared specifically for those installing the National Center's PBTE/CBSD curricular materials, it is intended that this guide may also prove useful in a wider sense to all who are interested in exploring the potential of performance/competency-based education at any level and in any subject matter field.

Acknowledgement is due to Glen E. Fardig, a research scholar in the College of Education at the University of Central Florida in Orlando, for taking major responsibility for preparing both the first and second editions of this guide, drawing not only from his prior work at the National Center but also from his considerable experience as a teacher educator responsible for the implementation of PBTE. Recognition is also given to Lois G. Harrington, program associate, for the refinement and editing of the manuscript.

Special recognition is also extended to the staff at AAVIM for their invaluable contributions to the quality of the final printed product, particularly to Marilyn MacMillan for module layout, design, and final art work; to Robin Ambrose and Suzanne Bowman for typesetting; and to George W. Smith, Jr., for supervision of the module production process.

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- Developing educational programs and products.
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Implementation Guide . . .
for Performance-Based Teacher Education & Competency-Based Staff Development Programs

Second Edition

PROFESSIONAL TEACHER EDUCATION MODULE SERIES

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INTRODUCTION

Performance-based teacher education (PBTE) is now widely accepted as an effective way to prepare teachers for vocational-technical classrooms and laboratories. Many colleges and universities have established PBTE programs for the preservice training of teachers. Secondary and two-year postsecondary vocational-technical institutions are using the performance-based approach in what are usually referred to as competency-based staff development (CBSD) programs. Public agencies and private corporations have found performance-based methods and materials valuable in training personnel trainers. The basic principles and practices of performance-based education are being incorporated into teacher education programs that do not use the term *PBTE* at all.

In the course of this expansion of PBTE, much has been learned about how best to plan, organize, and manage such programs. The collective experience of implementers across the country has provided the answers to most of the earlier questions and doubts about how the good ideas of PBTE could be developed into practical and functional training programs. Implementation has been found to be a complex process, demanding fresh outlooks, revised organizational patterns, and new instructional techniques.

It is the purpose of this guide to present answers to some of the more important implementation questions and possible solutions to some of the major problems. It will also suggest alternative courses of action that may speed and smooth the process of establishing PBTE or CBSD programs in universities, colleges, and education agencies. This guide is designed to assist those who are responsible for organizing and/or administering performance-based instructor training programs, whether dean, department head, project director, supervisor of inservice education, director of professional development, or other.

Implementation problems and management procedures are much the same for all PBTE and CBSD programs, though every program will likely have unique needs and constraints, and each will need to develop its own appropriate solutions. The ideas and recommendations presented in this guide should prove useful to a wide range of institutions. The procedures discussed here are particularly related to the use of the PBTE materials developed by the National Center for Research in Vocational Education and published by the American Association for Vocational Instructional Materials (AAVIM). However, institutions and agencies using other PBTE and CBSD materials should also find the contents of this guide to be of value.

The National Center's professional teacher education module series at present consists of 132 separately packaged booklets, or learning packages. These encompass all the professional competencies identified as being important to effective vocational-technical teaching. Each module is designed to help the teacher become proficient in one or more of the competencies. Virtually all the modules are self-contained and can be utilized in a variety of educational settings and instructional modes.

Two other documents developed by the National Center and published by AAVIM are related to this guide. The *Resource Person's Guide to Using Performance-Based Teacher Education Materials* is designed to help define the new professional role of the resource person and to amplify and clarify his/her responsibilities. Its specific concern is to prepare teacher trainers who will be conducting the PBTE or CBSD program, whether in a university teacher education, secondary or postsecondary staff development, or industrial training setting.

The *Student Guide to Using Performance-Based Teacher Education Materials* describes the basic principles of PBTE and CBSD to the students—pre- or inservice teachers—who are involved in the program. Its question-and-answer format briefly explains the program and helps to allay anxieties and correct misapprehensions. Because the guide is general in nature, students will need an additional orientation to their institution's specific PBTE or CBSD program.

Two broad assumptions are basic to the content of this guide. It is assumed that the implementing institution or agency has made a study of its training program and the professional needs of its pre- or inservice teachers and, as a result, has made a decision to work toward some form of performance/competency-based program. It is also assumed that the basic concepts and principles of PBTE and CBSD are well understood and accepted by the leaders of the implementation effort and that a majority of the teacher education or personnel development staff are convinced that the performance-based approach has genuine potential for program improvement. Thus, a detailed rationale for PBTE and CBSD is not presented here.

It should also be understood that there is no assumption—either in this or other related National Center publications—that the performance-based approach is the only direction for the improvement of teacher education. Nor is the use of the National Center's modules synonymous with PBTE/CBSD; they are presented as of proven value and worthy of serious consideration and study by teacher trainers.

This guide is organized into five main sections. The first two sections deal with general information on PBTE/CBSD and their implementation and should be of interest to all vocational-technical educators involved in establishing such programs.

In the third section, specific problems and solutions relative to campus-based university or college preservice teacher preparation programs are the focus. The fourth section is concerned with the unique organization of competency-based staff development programs in secondary and two-year postsecondary institutions.

There are some programs, of course, that do not fit neatly into either of the two main categories—PBTE or CBSD—and therefore will need to apply implementation techniques from both (a field-based program for the initial certification of inservice nondegreed vocational teachers is an example).

The final section of this guide—the appendix—briefly describes selected PBTE and CBSD programs now in successful operation, which may be used as models on which to build.

Chapter I

THE PBTE/CBSD CONCEPT

Performance-based teacher education (PBTE) and competency-based staff development (CBSD) are in many ways two different sides of the same coin. They share the same fundamental educational principles and even some of the same instructional and management procedures. They differ primarily in their target clientele and in the setting in which teaching and learning takes place. The accepted labels of PBTE and CBSD help differentiate them, but there are so many possible program variations that it is difficult to draw sharp dividing lines. In the final analysis, both PBTE and CBSD apply the performance/competency-based approach to improve vocational-technical instruction through better teacher preparation.

Types of PBTE/CBSD Programs

Performance-based teacher education programs are usually established under the auspices of a college or university. Campus-based PBTE programs include (1) regular four-year degree programs, leading to a bachelor's degree and a teaching certificate in some area of vocational-technical education and (2) nondegree programs designed for teachers entering the profession directly from business and industry, leading to a teaching certificate in the individual's occupational service area. Whether instruction takes place on the main campus, in branch campuses, or at outreach centers, the program centers around the university.

In some noteworthy PBTE programs, the instructional program is field-based, with instruction delivered in the schools in which the teachers-in-training are already working. University teacher educators organize and supervise the program, university resource persons work closely with teachers-in-training, and the university awards credits and degrees. However, learners in the program (incumbent teachers) work independently or in small groups in their own environments to complete modules and acquire the requisite teacher competencies. Programs of this type are meant to bring PBTE to teachers rather than to bring teachers to the teacher education institution.

Competency-based staff development programs are most commonly organized to serve the faculty of an individual secondary or two-year postsecondary institution. The purpose of the CBSD program is to upgrade the professional skills of the faculty, whose participation may be voluntary or required as a condition of employment. Participants may be awarded professional improvement points, college credits from a nearby university, or enhanced annual evaluations. The content of these staff development programs often reflects very clearly the institution's particular needs and the skills required of its instructors.

In recent years, nondegree vocational instructor preparation programs operated by local school districts are becoming more prevalent. They may be considered CBSD programs because they are locally operated to serve instructors already on the job in the district's classrooms and laboratories. However, the programs must obtain state department of education approval because their purpose is to prepare instructors for initial certification, and university teacher educators are often used as curriculum consultants and resource persons.

Nature of PBTE/CBSD Programs

PBTE/CBSD programs are built on two fundamental principles: (1) the essential competencies to be mastered by the teacher are identified, through research, based on what a teacher must know and be able to do to be successful; and (2) assessment of the teacher's competence uses his/her performance in an actual teaching role as the primary source of evidence. Without these fundamentals in place, a PBTE/CBSD program cannot be said to exist. With them, the PBTE/CBSD approach allows for use of a great range of instructional methods and management procedures, from relatively conventional to most innovative.

Institutions and agencies committed to the familiar pattern of course structure and group instruction should have no difficulty implementing a PBTE or CBSD approach. Lectures, discussions, and assignments can be organized around the teaching competencies specified as program content. Teacher education modules can be used to provide basic information about a competency, and selected learning activities can form individual and group assignments. Performance criteria included in the modules can be used to assess the learner's product or performance.

Program designers also find that the PBTE/CBSD approach lends itself quite naturally to a number of innovative instructional strategies. Self-pacing is readily implemented, with learners progressing through a series of teaching competencies as rapidly as their abilities and efforts allow. It is also possible to create personalized programs, in which a series of teaching competencies is selected to meet the express personal needs and professional responsibilities of an individual teacher.

Finally, there is opportunity to develop individualized instruction, that is, to use methods of instruction designed to accommodate individual differences in background, skill levels, aptitudes, and learning styles, though the competencies to be achieved remain the same for all. By exploring these characteristics of PBTE/CBSD, the astute program developer can implement teacher preparation that meets the needs of vocational-technical teachers to a degree never before possible.

Criteria for PBTE/CBSD Programs

Since their inception, PBTE and CBSD have been subject to many interpretations—and some misinterpretations. Many educational institutions have now designed programs that incorporate the fundamental principles and practices of PBTE/CBSD. Others have selected a few related ideas, implemented them, and called their programs performance/competency-based.

There have been a number of attempts to define PBTE and CBSD and to develop criteria that describe such programs. The program criteria presented in sample 1, abstracted from those developed in a recent statewide study, can be used to help determine the extent to which a particular program is performance/competency-based. They can also be used by individuals about to implement a PBTE/CBSD program to identify tasks to be completed in the developmental process.

SAMPLE 1

SUGGESTED CRITERIA FOR PBTE/CBSD PROGRAMS

Competency Specification

1. Competencies are (a) derived from the professional roles and responsibilities that research has determined are important to vocational-technical educators and (b) specific to the program rationale.
2. Competency statements describe the tasks essential to the performance of a teacher's functions. Analysis of those tasks reveals the knowledge, skills, and attitudes required for successful performance.
3. Competencies are considered tentative predictors of professional effectiveness and are thus subjected to continual verification or validation.
4. Competency statements facilitate criterion-referenced performance assessment.
5. Competencies are specified and made public prior to instruction.
6. Competency profiles specify the minimum competencies to be acquired but provide opportunity for learners to master more than the minimum.

Instruction

7. The instructional program is derived from and linked to specified competencies.
8. Instruction that supports competency development is organized into manageable components.
9. The instructional program accommodates learners' styles, sequence preferences, pacing, and perceived needs.
10. Learners' progress is determined by demonstrated competence.
11. Learners are informed throughout the program of their progress in achieving competencies.
12. Learners' assessment of the instructional system is used to revise the system.
13. Competency measures are related to competency statements and performance objectives.
14. Competency is measured, to the extent possible, through observation of performance in actual teaching situations, using a criterion-referenced assessment instrument.
15. Competency measures are sensitive to the context within which learners perform.
16. Competency measures and performance standards are specified and made public prior to instruction.
17. Applicaton of competency measures generates data that are manageable and useful for decision making.

Governance and Management

18. Management responsibilities and procedures are clearly defined.
19. Administrative flexibility is sufficient to support the teacher education program.

Total Program

20. Program staff's behaviors and attitudes parallel those desired of learners in the program.
21. The program provides instruction in a variety of appropriate settings.
22. The program provides for staff orientation, assessment, improvement, and reward.
23. Research and dissemination activities are an integral part of the program.
24. The program is planned and operated as a totally unified, integrated system.
25. Adequate resources and facilities are available for the program.
26. Preparing learners to establish and manage competency-based education (CBE) programs for vocational-technical students is integral to the program.

SOURCE: Adapted from *Performance-Based Vocational Teacher Education in Florida: Criteria for Programs*. Tallahassee, FL: Florida State Department of Education, Division of Vocational, Adult and Community Education, n.d.

NOTES

Chapter II

CHANGING TO PBTE/CBSD

It is important that the school or college leaders are convinced that the teacher training program needs to be improved and that the performance/competency-based approach is the direction to be taken—important, but not sufficient. The change to PBTE/CBSD may affect a great many persons: instructors, teacher educators, school administrators, undergraduate students, and program support personnel. If the establishment of a PBTE/CBSD program is to be successful, it will need the understanding and acceptance of all these people. The key to understanding is information, and the basis for cooperation is commitment. Neither of these results can be expected to come automatically, without effort.

Implementation Barriers

Any vocational-technical leader contemplating the implementation of PBTE/CBSD must be prepared to face a number of barriers and should be armed with strategies to overcome them. For the most part, the barriers are of three types: (1) barriers caused by a lack of support and resources, (2) obstacles that must be removed or dealt with through some coping mechanism, and (3) delusions or misperceptions caused by incomplete or inaccurate information about PBTE/CBSD.

A great many of the perceived barriers to PBTE/CBSD are "people problems." People are concerned that their long-held beliefs about teacher education and staff development are being challenged; they may question their ability to meet the new demands to be placed on them; and they typically resist change. Whether people's perceptions are based on real and tangible obstacles or misguided mental attitudes does not matter very much; the barriers are real to them and must be dealt with.

Institutions that are currently operating PBTE/CBSD programs have faced and overcome most barriers without extreme difficulty. As the programs have been implemented and become routine, the barriers were surmounted and tended to disappear, either in fact or in perception. It is heartening to note that somewhere, someone has found a workable solution to overcome—or at least cope with—every barrier to the implementation of PBTE/CBSD.

Expressed Concerns

In any open discussion about PBTE/CBSD, there are a number of questions and issues that are almost inevitably raised. Whether such questions are considered relevant or irrelevant by those seeking to implement this approach, they should be responded to directly and forthrightly. For the most part, concerns about PBTE/CBSD are based on criticism of teacher training in general and can be dealt with accordingly. Among the concerns most likely to be voiced in any discussion of PBTE/CBSD are the following:

- The parts do not equal the whole. The mere fact that teachers are able to demonstrate isolated competencies does not guarantee success in the classroom.
- Because PBTE/CBSD is based on the systems approach, it is mechanistic and dehumanizing.
- It is inconsistent for PBTE/CBSD to claim to be individualized and yet expect each teacher to display the same competencies.
- Trivial behaviors are those most easily operationalized; the really important aspects of teacher education may be overlooked.
- We really know so little about how people learn that it seems ridiculous to base a program on competencies that may not be the appropriate ones.
- The really important areas of teaching are in the affective domain, and these are inadequately dealt with in performance-based education.[1]

Effective responses to these challenges can be found throughout the literature of the field. However, one note is in order here. PBTE/CBSD is not synonymous with individualization, as is sometimes represented. Individualized instruction, unlike PBTE/CBSD, places emphasis on the **method of instruction,** not on content, assessment procedures, or standards of performance. It is characterized by choice on instructional mode and media, and adjustment of instruction to learner characteristics.

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[1] Allen A. Schmieder and ERIC Clearinghouse on Teacher Education, *Competency-Based Education: The State of the Scene*, PBTE Monograph Series: No. 9 (Washington, DC: American Association of Colleges for Teacher Education, 1973).

PBTE/CBSD **can be individualized,** but need not be. In addition, PBTE/CBSD **can be personalized** by selecting a group of competencies specifically to meet the express needs of an individual instructor. Staff development programs are indeed often personalized, and to good purpose.

The questions most frequently asked about the National Center's PBTE/CBSD materials tend to be similar to those asked about PBTE/CBSD in general. The most prevalent concerns, along with very brief responses, follow. Additional information on which to base extended responses can be derived from this guide and from other National Center documents on PBTE and CBSD.

Concern. No beginning vocational teacher can be expected to master all the professional teacher competencies included in the National Center's modules.

Response. No beginning teacher is expected to. The competencies in the total series are seen as the lifetime skills of a fully effective professional teacher. Beginning teachers will need to be proficient in some of the competencies immediately, as soon as they enter the classroom. Other competencies can be acquired gradually over time. Some of the identified competencies (e.g., those involved in coordinating cooperative education) may never be needed by some instructors. Through module selection, every teacher can develop a personal repertory of skills best suited to his/her needs, interests, and capabilities.

Concern. The National Center's modules appear to be devoted exclusively to teaching skills, without concern for the important affective domain.

Response. It is certainly agreed that teachers' attitudes and values are highly important to effective teaching. The National Center's modules deal with these important matters in the information sheets and in many of the prescribed learning activities. The final assessment forms of many of the modules include items that expressly or implicitly focus on the affective aspect of teaching. The resource person, an integral part of the PBTE/CBSD program, has additional opportunities to guide teachers' affective learning.

Concern. There is no conclusive research that proves that the teacher competencies on which the modules are based are directly related to student learning.

Response. This concern was much more relevant some years ago than it is now. A great deal of significant research has directly linked teacher behaviors with student learning. Though continuing research is still needed, the studies on which the National Center's modules are based are clearly steps in the right direction. The identified competencies constitute a far more solid foundation on which to build a teacher education curriculum than the intuitive approach to curriculum construction that has sometimes characterized teacher education in the past.

Concern. The National Center's PBTE/CBSD modules seem to imply that all vocational service areas, all teacher education institutions, and all staff development programs should have the same training program.

Response. Not at all. Each institution will probably want to develop a PBTE/CBSD program unique to the needs of its pre- or inservice teachers, its own resources, and its educational setting. The selection of specific modules and the organizational framework in which they are used permit a rational and systematic approach to program design. The modules themselves are developed based on the professional teaching competencies that research has shown to be common to all service areas and are written so as to be relevant and valuable to all vocational-technical instructors.

Concern. The ideas seem to be good ones, but the cost and complexity of implementing such a program make it unfeasible.

Response. It is true that the implementation of a PBTE/CBSD program that uses the National Center's materials requires thorough planning if they are to be used to their greatest potential. However, good planning is necessary for any effective teacher education program. The cost of implementation can vary a great deal, but if the instructional system is kept simple, costs (e.g., the teachers' expenditures for modules and the institution's cost of instruction) should be comparable to that of traditional programs. Because the PBTE/CBSD approach is a thorough one, the cost/ benefit ratio may be favorable indeed.

Concern. The availability of the National Center's materials makes it possible for secondary and two-year postsecondary schools to get involved in teacher education, thus undermining the position of legitimate teacher education institutions.

Response. Institutions that are respected centers for vocational teacher education need have no fear concerning the use of the National Center's materials by others. There is a great deal of work to be done in preservice and inservice teacher education. Institutions with up-to-date programs of proven effectiveness, responsive to the needs of vocational-technical education, will continue to find their services in strong demand. There may be a realignment of responsibilities, new patterns of cooperation among institutions, and increased pressure for traditional programs to revitalize themselves, but these changes can greatly benefit the education of teachers.

The Basis for Change

Any institution embarking on the implementation of PBTE/CBSD should develop its own sound institutional model for the proposed program. This is a demanding task, and experience shows that it must not be omitted in the haste to get things done. Program leaders and developers must know **why** they are contemplating PBTE/CBSD; it should not be done on the basis of some passing enthusiasm.

The dean or director must first have a clear vision of what he/she wants for the institution and how PBTE/CBSD will contribute to the achievement of worthy goals. The faculty can then be asked to contribute to the vision and help formulate plans to make it a reality. At some point in the discussion, however, the program leaders will need to make a firm decision to proceed; at that point, debate and discussion change to planning and implementation.

A very early step should be to review and update the philosophy and mission statement of the institution—or to develop such a statement if it does not already exist. This should be done even for a well-established institution or for a small cluster of faculty ready to implement PBTE/CBSD. This statement provides a sound rationale for change and a description of how the change will benefit the faculty, the students, and the school or college.

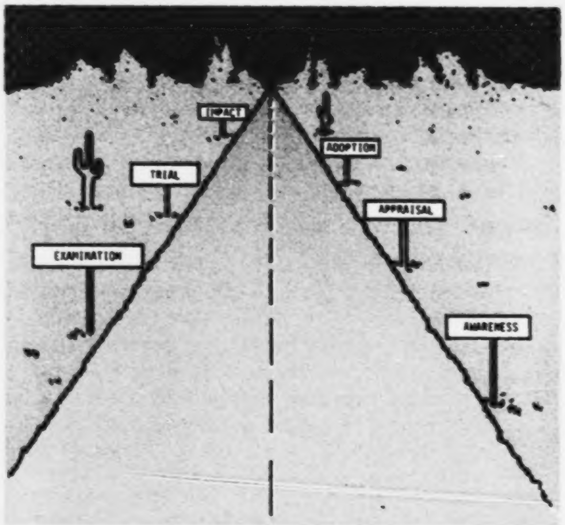
Faculty also need an expert and knowledgeable person to assist them in making the transition to PBTE/CBSD. Institutions that have a competent and committed **program director** (or curriculum specialist) can make excellent progress toward implementation. Where this key person is missing or weakly qualified, progress will probably be slow—or may even come to a halt.

The Change Process

Even though PBTE and CBSD have been on the educational scene for a number of years, to many vocational educators the approach constitutes an innovation—one that requires considerable personal and professional change. There are several assumptions about change and the adoption of innovations that need to be understood before successful implementation can be accomplished:

- Change is a **process**, not a single event.
- Change must be made by **individuals** first, then by the institution involved.
- Change is a **highly personal** experience, which can affect an individual deeply.
- Change entails **developmental** or gradual growth in attitudes and skills, rather than a sudden shift.
- Any **interventions** or learning activities must be related first to the people involved, and second to the innovation itself.

Institutions, like individuals, reach the decision to change by proceeding through a progression of stages. The length, complexity, and difficulty of these stages may vary with the institution and its personnel. To be effective, every individual involved—as well as the institution as a whole—should progress through the following stages in succession, without bypassing any.



Awareness. The ideas involved in the performance/competency-based approach are presented to the members of the institution. They become aware of the basic principles and practices but are only passively interested and concerned. Depending on the presentation and their personal backgrounds, they may or may not wish to know more about it. They may still have some misinformation about PBTE/CBSD.

Examination and study. The potential of the approach is studied, discussed, and examined closely. Further information is sought and acquired. This is the appropriate stage for thorough examination of the National Center's modules and their conceptual base. Group work is organized, and tentative outcomes identified. A generally positive response is crucial at this stage in order for there to be continued progress toward the adoption of PBTE/CBSD. The program director can assist group members in this phase by facilitating the acquisition of information, bringing in consultants and curriculum developers, and helping to organize the effort.

Appraisal and decision. The staff appraises the potential of PBTE/CBSD to improve teacher education or staff development in the institution and estimates the benefits of such a change. A decision must be made at this point concerning whether the innovation has merit and whether the institution should indeed move toward some form of implementation. The program director can provide psychological support, ease tensions, minimize threatening situations, and help bring the decision process to closure.

Trial and experiment. The institution begins to implement the PBTE/CBSD program on a trial basis, usually on a small scale. The staff identifies problems, experiments with solutions, and develops some workable modes of operation. Decisions concerning future courses of action and commitments are made during this phase. The program director can bring all available forces to bear in devising solutions and thus increasing the chances for success.

Adoption and integration. With the completion of a successful trial phase, the institution proceeds to implement the approach as a larger proportion of the teacher education/staff development program. It commits the necessary resources of staff, funds, and physical facilities to the task. Integration and institutionalization merge as adoption continues. PBTE/CBSD becomes an established and accepted function of the institution.

Impact and coordination. As the program continues and is refined, formal studies are conducted to determine the impact of policies and procedures on the operation of the program. Formal studies are also conducted on the program's impact on teachers in training and instructors. Formal groups of interested educators look for strategies to improve or modify their program and for alternate ways to operate and administer the program.

Program leaders must go through the adoption process themselves, acquiring knowledge, special skills, and management experience. They must also lead their faculty and staff through each stage—as a group and as individuals—providing planned experiences to assist in the passage. If the leaders are not trained in the process of educational change, consideration should be given to getting outside consultative services for the institution.

Program Steering Committee

An institution moving toward implementation of a PBTE or CBSD program should seriously consider forming a steering committee to help give direction to and smooth the transition process. The steering committee can represent major constituents, so they feel a sense of ownership in the project. Properly chosen, committee members will represent a variety of abilities and experiential backgrounds that should be useful to the work of program design and implementation. Finally, the steering committee can bring a sense of perspective and priority that might be lacking if only one person were to have responsibility for the work.

The size of the steering committee should be fairly small, perhaps five to seven members, so members can discuss and act responsively. It should include representatives of the groups most directly affected by the results, either as producers or consumers. This is a working group, so *pro forma* or courtesy appointments should be scrupulously avoided. Depending on the nature of the training program, committee membership might include the following:

- Members of the professional development staff
- University teacher educators
- Classroom instructors
- Program supervisors/administrators
- Program support staff

The overall functions of the steering committee are to help guide the total implementation effort, to present the needs and represent the viewpoints of the constituent groups, and to assist in the solution of specific implementation problems. The amount of responsibility, the specific duties assigned, and the final decision-making power of any such group will vary according to the needs of the program and the requirements of the institution. In all cases, however, the committee should have a genuine purpose and the authority to identify problems, gather information, and delegate responsibility for taking actions to specified individuals. On the other hand, the steering committee should be controlled to the extent that it does not attempt in its enthusiasm to take on tasks for which it has little expertise or experience.

Among the possible responsibilities of a steering committee are the following:

- To study and review the proposed PBTE/CBSD program
- To recommend (or decide on) broad policies
- To assign responsibilities to others (or recommend such assignments)
- To suggest solutions to concrete problems
- To express the needs and viewpoints of constituent groups
- To review instructional materials
- To bring information concerning program plans to the attention of constituent groups

Depending on its composition, the personal involvement of its members, and the responsibilities it is given, the steering committee has the potential to become a valuable support group and reservoir of expertise for the program director. Skillfully utilized and genuinely consulted, such a committee can also exert a great deal of positive influence on the populations it represents.

Program Planning Guide

There are so many broad issues to be faced and so many details to be decided upon that any program planner could be forgiven for sometimes feeling overwhelmed. It can therefore be helpful to use some form of guide or checklist to put structure into the decision-making process. Sample 2 represents such a planning guide. By seeking answers to specific identified questions, the program director can reduce the risk of overlooking essential items. The questions in the sample planning guide are general ones, which should be supplemented with additional questions appropriate for the type of program involved, whether teacher education or staff development.

Orientation

Who. The program director or other leader of the implementation effort will need to determine which groups and individuals within and outside the institution should be informed about the proposed new program. Each institution will probably identify a unique constituency to whom it is responsible.

For example, leaders of a university preservice program may focus their attention on orienting crucial individuals or groups in the institution (e.g., dean, registrar, undergraduate curriculum committee), school district personnel from whom cooperation is needed (superintendent, principals), and certification officials in the state department of education. Leaders of a community college staff development program may be most concerned with orienting their own faculty and administrators, as well as faculty in a cooperating university teacher education program.

What. The overall goals of an awareness and orientation program should be to improve understanding and to change attitudes, values, and behavior patterns of those involved in teacher education or staff development—quite a large order. Some attitudes and values may be very close to an individual's professional self-concept and, thus, resistant to change. Behaviors may have become long-established habits or traditions with which individuals are comfortable. The task of orienting and informing constituent groups should not be underestimated, nor should it be undertaken in a haphazard manner.

Specifically, the task is to lead individuals through the stages of change, from simple awareness to actual operation. For some, this can be a quick and brief process. The bookstore manager, for example, may need only general information about the program, how the modules contribute to it, and how the bookstore can help by ordering and maintaining a stock of materials—all discussed in an hour or so. On the other hand, a full semester or more may be required to inform a school or college faculty about the design of the new staff development program, to convince them of its benefits, to orient them to its operation, and to encourage them to participate.

Throughout the whole orientation process, there must be a sense of trust; everything that happens must be aboveboard. The program director must be open and honest with faculty and others about the work required, the difficulties anticipated, and the rewards that will ensue. Orientation and planning for change must take place face-to-face, not through memos, published edicts, or decrees. At the same time, the program director must not vacillate or allow a variety of approaches; otherwise people will get mixed messages about the value of the approach and the institution's determination to move ahead.

SAMPLE 2

PROGRAM PLANNING GUIDE

The Program for Change

- What groups (or individuals) will be most affected by the change to PBTE/CBSD?
- What persons must be committed to the new program before it can be implemented?
- How can the cooperation of the faculty and staff best be obtained?
- What groups outside the institution should be informed or consulted about the program?
- How can outside consultants be used to effect the implementation of the program?
- How can the personal and professional needs of the staff be met in the proposed program?
- What other efforts will need to be made to facilitate the change to PBTE/CBSD?

Program Design

- How will teaching competencies be selected in the various aspects of the program (e.g., instructor certification, inservice staff development, and/or survival skills for instructors newly recruited from business and industry)?
- How will the competencies be grouped or organized (e.g., into courses, clusters, categories)?
- How will requirements and credits be determined?
- How will grades for completed modules or courses be determined?
- How will learners be informed about the structure and requirements of the program?
- How will programs be designed for individual instructors?
- How will learner progress and achievement be recorded?
- What provision will be made for learners who work at varying rates?
- How will learners' pre-existing competencies be evaluated?

Management of Instruction

- Who will serve as resource persons in the institution?
- Who will serve as resource persons in the schools or in the field?
- How will resource persons be given the training they need?
- Will modules be used in instruction? If so, how will they be used?
- How can group activities be organized for inservice teachers in the field?
- What will constitute final assessment for each competency?
- What arrangements will be needed to provide for videotaping, role-playing with peers, and other simulation activities?
- What arrangements need to be made to ensure that resource persons are conveniently available to learners?
- How will learner motivation and progress be maintained?

Resources for the Program

- What additional (or reorganized) space or facilities will be required for the program?
- What additional equipment will be needed?
- How will a resource center be provided?
- How shall the resource center be organized and managed?
- What special instructional materials and resources will be needed?
- How can all the needed resources be acquired?
- What are the priorities among the needed resources?

Administration of the Program

- What, if any, departmental reorganization should be carried out to facilitate implementation?
- What institutional or departmental policies and procedures will need to be changed to accommodate the program?
- How shall teaching loads be modified to meet the needs of the program?
- What staff duties will need to be changed or added?
- What new staffing requirements will there be?
- How shall certification be provided under the program?
- What agreements and arrangements need to be worked out with local school systems and universities?
- What registration procedures will be required?
- What approvals are necessary before the program can be established and operated?

Program Costs and Funding

- How will modules and instructional resources be purchased?
- How will learners be furnished modules?
- How will tuition and fees be assessed?
- What extra operational costs are involved?
- What extra program start-up costs are required?
- What funds are available? What sources of additional funds are available?

Program Evaluation and Refinement

- What arrangements will be made to maintain communication and share data with other institutions?
- How will student reaction and response to the program be obtained?
- What arrangements will be made to gather data on program effectiveness?
- How will data generated in the program be used for evaluation and refinement?
- Who will be responsible for evaluating the program?

How. Information about the PBTE/CBSD program and orientation to the PBTE/CBSD concepts should be tailored to fit the target audience. The orientation program should not be a set package, with the same information, the same transparencies, and the same activities for every group. It would be useful, however, to produce a set of high-quality materials (e.g., overhead transparencies, handouts) from which appropriate items could be selected for each presentation.

Individuals should be given the information that is relevant and of interest to them. School or college faculty will surely be bored by a long presentation on the status and deficiencies of staff development in America but would probably be very interested in a walk-through of a module covering a skill of particular interest to them. A university curriculum committee might need to understand the research base for PBTE, a group of school administrators might not.

The orientation format should also be selected with the group in mind. Whatever the format—whether formal presentation, media presentation, open discussion, or group activities—the basic objective should be to communicate and influence, not command and impose. In selecting communication strategies, the program director planning the orientation program should consider use of the following techniques:

- Informal conversations with individuals and small groups
- Small- and large-group discussions
- Workshops and meetings
- Formal presentations and symposiums
- Group retreats
- Brochures, fliers, and handbooks

Institutions that have implemented the National Center's teacher education modules have successfully used the following strategies in their awareness/orientation programs:

- Workshops or meetings in which members of the professional staff of the National Center make presentations and conduct learning activities
- Faculty meetings in which individuals who have been directly involved in a PBTE/CBSD program give informal presentations concerning their reactions to the program and materials
- Use of the National Center's slide/tape "Overview of the Center's PBTE Program" in presentations to faculty groups
- Small-group discussions based on the Vocational Teacher Competency Profile, a chart of the teaching skills covered in the National Center's modules, organized by broad duty areas
- Large-group presentations about the PBTE/CBSD approach, led by institution staff and based on National Center documents
- Faculty group "walk-throughs" of a typical teacher education module
- Teleconferences in which an expert on PBTE/CBSD talks to an interested group and responds to their questions
- Visits by individuals or small groups to successfully operating PBTE or CBSD programs, in which implementers explain their programs and share their sense of commitment and enthusiasm
- Use of outside consultants experienced in the performance/competency-based approach and the characteristics and benefits of such programs

Instructional Materials

In most PBTE/CBSD programs, and specifically at institutions using the National Center's PBTE/CBSD curricular materials, instruction is modularized. Organizing the instructional program around modules increases the possibilities for student self-pacing and individualization. It also provides performance assessment procedures that are relatively objective. Basically linear in instructional design, modules do however provide for individualized learning activity options. Learners who have already achieved the enabling objectives through previous experience can bypass certain learning experiences.

Institutions embarking on the implementation of a PBTE/CBSD program can choose to use the existing National Center modules. Or, they can develop a whole new set of modules to meet their own specific needs—if they have the time, staff, and resources to do so. Or, they can supplement selected National Center modules with locally developed, institution-specific modules. Institutional plans also need to consider what audiovisuals can be obtained or developed to support and enhance instruction. And finally, whatever materials are used, some method of providing those materials to the learners must be devised.

Available Modules

A National Center module is a printed instructional package containing a set of learning experiences designed to help the teacher acquire and demonstrate one or more particular teacher competencies. The 132 National Center modules are designed for both preservice and inservice application in any of the several service areas and program levels of vocational-technical education.

The three domains of learning (cognitive, affective, and psychomotor) are accommodated in the National Center's modules. Provision is made for the learner to acquire the essential knowledge and develop the required skill by completing the learning activities in each module. Many objectives also have an affective element, even if that element is not explicitly stated in the module's objective statement. Opportunity for further affective development is possible through special experiences provided by the resource person and through the manipulation of the learning environment.

A model of an instructional module, presenting a graphic representation of the learning sequence, is shown in sample 3. Another guide in this series, the *Resource Person's Guide,* describes in detail each component of a National Center module, its structure, purpose, and use. It also contains an explanation of the extensive development, testing, and revision process leading to the modules now available.

Institution-Specific Modules

There may be conditions in which additional, situation-specific modules need to be developed by the implementing institution. Such conditions might include the following:

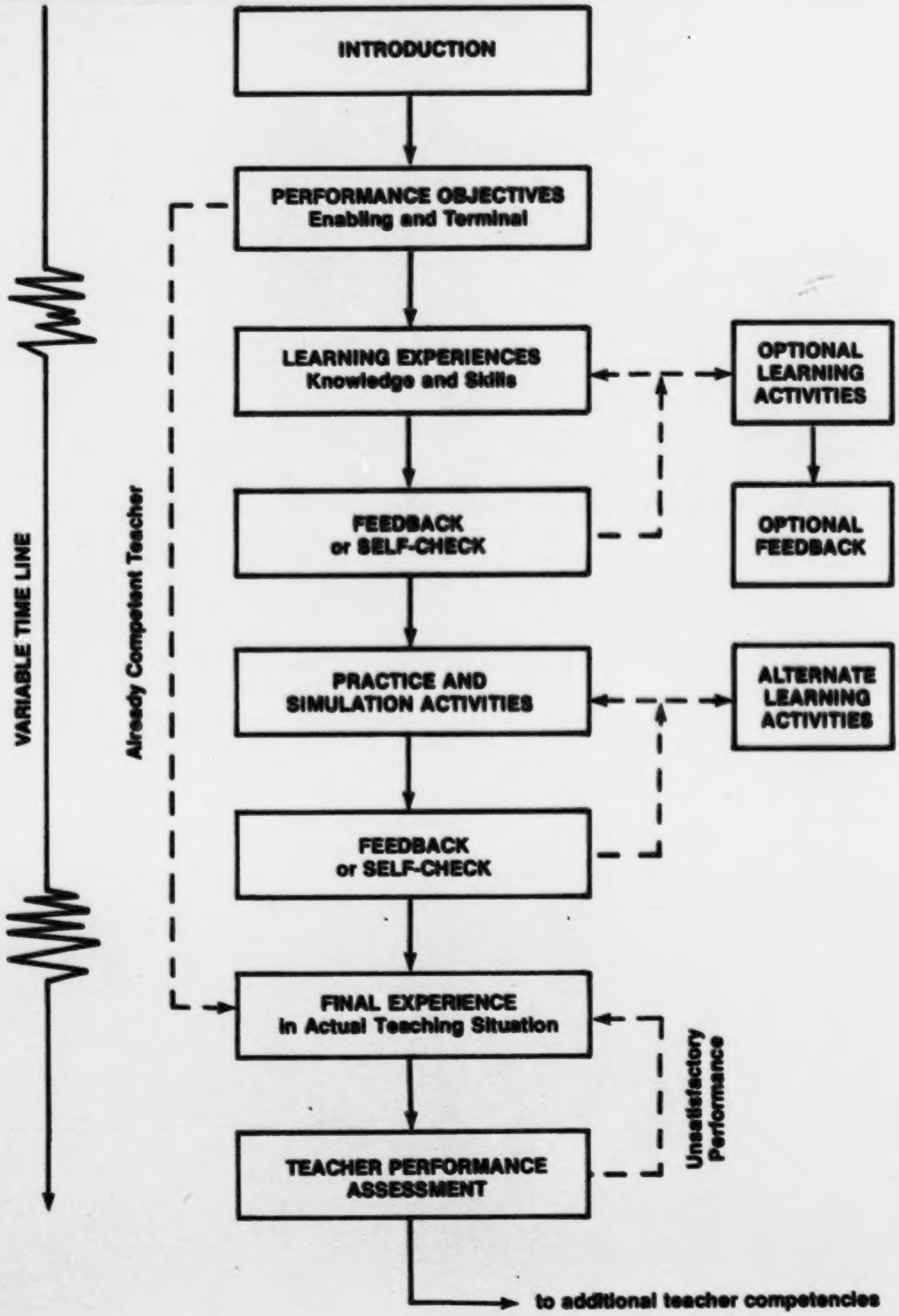
- A need for instructional materials dealing with professional competencies (teaching skills) that are not included in the National Center modules—competencies perhaps appropriate only to a specific institution and its educational setting
- A need for modules that can be used in the technical (occupational) skills phase of the teacher education program

Institutions may wish to involve PBTE/CBSD program staff in developing special modules to meet their needs, perhaps as an experimental project. This is a feasible undertaking and one that can lead to the professional growth of the project staff. In order to have a reasonable chance for success and to be able to produce effective materials, however, several conditions should be met:

- The local modules should be in the same format as those of the National Center. Variable formats serve to confuse learners and frustrate instruction—all to no good purpose. The format of the National Center's PBTE modules has been thoroughly developed and extensively tested and has proven to be effective.
- Ample personnel resources must be available. Module writing and development is a time-consuming and expensive process, one that is often drastically underestimated.
- In order to ensure the validity of the objectives, it is necessary to verify the proposed competencies using one of the accepted developmental processes (e.g., use of the Delphi procedure or the DACUM approach).
- The modules should undergo small-scale testing and revision before being used throughout a program. Untested and unrefined modules are unlikely to be fully effective.

SAMPLE 3

MODULE INSTRUCTIONAL SEQUENCE


VARIABLE TIME LINE
Already Competent Teacher
INTRODUCTION
PERFORMANCE OBJECTIVES
Enabling and Terminal
LEARNING EXPERIENCES
Knowledge and Skills
OPTIONAL LEARNING ACTIVITIES
FEEDBACK or SELF-CHECK
OPTIONAL FEEDBACK
PRACTICE AND SIMULATION ACTIVITIES
ALTERNATE LEARNING ACTIVITIES
FEEDBACK or SELF-CHECK
FINAL EXPERIENCE
in Actual Teaching Situation
Unsatisfactory Performance
TEACHER PERFORMANCE ASSESSMENT
to additional teacher competencies

Furthermore, modules developed locally should meet certain established criteria. Extensive experience in module development and data-based evidence from both resource persons and learners have given the National Center a unique understanding of the characteristics of effective modules. Among these are the following:

- Each module should be essentially self-contained. Readings, practice materials, forms, data, and other information needed by the learners should be within the module itself.
- The module should be organized in a simple, sequential pattern. The learner should be able to proceed straight through, from front to back. Complex instructional paths and flow charts are neither necessary nor well accepted.
- A variety of approaches in the learning activities, practice activities, and feedback is highly desirable.
- The language used should be clear and straightforward. Scholarly presentations and educational jargon are inappropriate. The reading level should be appropriate to the audience.
- The module must be seen to deliver on its stated objectives and competencies. It must clearly provide experiences that will result in the learner achieving the desired proficiency.
- The content of the module (information and learning activities) must be on target and promote efficient learning. It must not include information that is simply "nice to know" or "interesting."
- The final printed module must be of high quality: good reproduction, quality paper, professional illustrations. Learners quickly reject unattractive and difficult-to-use instructional materials.

Audiovisuals

There are a number of significant advantages to adding locally produced audiovisual materials to the PBTE/CBSD program. Performance/competency-based education recognizes that people have a diversity of individual learning styles, and audiovisuals offer almost unlimited possibilities for augmenting, enriching, and varying the modules' learning activities.

Materials can be developed to meet the **specific needs** of the learners and the local instructional situation. Teachers with different cultural backgrounds, or who work in schools with urgent and unique problems, or who have special interests and concerns not shared by most others may benefit greatly from locally produced audiovisual materials.

Learners are more likely to accept and associate with filmed or taped performers (e.g., teachers and resource persons demonstrating teaching techniques) who are **familiar and trusted figures** than they are to unknown outsiders. Even materials that are not professional productions are usually quite acceptable to local audiences—and just as effective.

The **cost** can be much lower than for commercial materials, with resource persons and teachers doing a great deal of the production. For example, a simple videotape of a local teacher performing competently in a classroom may be just as valuable in terms of instruction as a far more costly product. The tape itself can be reused and, thus, the materials can easily be kept up-to-date.

Audiovisuals can be incorporated into the PBTE/CBSD materials in several ways. They can be included as required activities, augmenting the activities already in a module. Audiovisuals can be included as optional or alternate learning activities, designed to make the program more effective or attractive to learners. They can function as reinforcement or assistance for groups of learners with special needs.

Among the great many ways locally produced audiovisual materials can be used with the PBTE/CBSD modules, a few are suggested here:

- Videotapes of actual teachers using specific instructional techniques in the classroom or lab can enhance the use of most of the modules in Category C: Instructional Execution. A performance may be a model one, or it may be flawed so the learner can critique the performance.
- Audiotapes can be produced by resource persons in each occupational service area to provide learners with service-area-specific information, examples and illustrations, and special techniques related to a particular module.

- Slide/tape presentations can make many of the instructional materials more meaningful. For example, modules on organizing and managing vocational labs (Modules E-8 and E-9) can benefit from a slide/tape showing exemplary labs and poorly organized labs, with the narrator pointing out the strengths and weaknesses illustrated. Modules in Category H can benefit from slide/tapes showing students involved in various vocational student organization activities.

Videotapes of local teachers and students in the classroom are usually low in cost. Audiotapes are both easy and inexpensive to produce. Slide series or slide/tape presentations can be developed by the institution's media department, or they can even be made as teacher projects. Adding locally developed mediated instructional materials to the PBTE/CBSD program should probably be a continual function of the implementing institution, since it is an economical and relatively easy means of increasing the effectiveness of the program.

Distribution Methods

For most university teacher education programs, the easiest way to distribute modules to students is through the campus bookstore. Students buy the modules they need and keep them for their own use and reference. This should not be an undue hardship financially, because the cost of modules for a complete teacher education program is usually lower than for a comparable set of required textbooks. The bookstore should be requested to keep a full line of titles in stock at all times so students can buy not only the ones they need at the moment but others that attract their interest as well.

The situation may be slightly less convenient for outreach or off-campus centers. If there is a small book counter at the outreach center, modules ordered by the instructor for a particular term can be sold there. In field-based programs, the itinerant teacher educator may find it necessary to take responsibility for supplying modules to teachers and collecting and accounting for the money. Teachers can, of course, be asked to order modules from the publisher themselves on an individual basis.

Staff development programs in schools and colleges usually have a professional library or resource center where one or two copies of each module specified in the program can be kept on file for use by teachers as needed. One of the best ways is to have a pamphlet file box for each module and to include in the box a copy of the module as well as all the supplementary materials associated with that module (e.g., copies of related articles or handouts, examples of finished written products, and audiovisuals). Institutions with sufficient staff development funds often supply the necessary modules free of charge so that instructors always have copies readily available on their bookshelves.

Facilities: The Resource Center

The physical facilities for a PBTE/CBSD program may be simple or elaborate, fairly conventional or very advanced, new or old. Thus, no institution should reject the idea of implementing the PBTE/CBSD approach solely on the grounds that the necessary facilities cannot be provided.

Ideally, however, facilities for PBTE/CBSD cater to independent study, with less need for classrooms designed for large-group instruction. There is space for the use of a variety of audiovisuals, along with the necessary equipment. And, facilities for individual study, simulated performance, and conferences are centralized if at all possible.

A facility that can provide these ideal characteristics is the resource center, a flexible, centralized learning unit that combines many attributes of a library/bookstore, media area, classroom, workshop, seminar room, and instructional counseling center. A resource center, properly planned and managed, contributes greatly to program success and quickly becomes the hub of operations around which the total system revolves.

Activities that can conveniently take place in a resource center include the following:

- Storage and distribution of instructional modules
- Independent study
- Scheduling of learning activities
- Storage of instructional media and materials

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Either as a part of the resource center itself or in a closely related facility, other, less quiet activities of the PBTE/CBSD program, such as the following, can be provided for:

- Assessing teacher performance
- Videotaping teacher performance
- Viewing tapes and using a variety of other instructional media and materials
- Holding seminar sessions
- Holding teacher/resource person conferences
- Exhibiting teacher-produced projects and displays

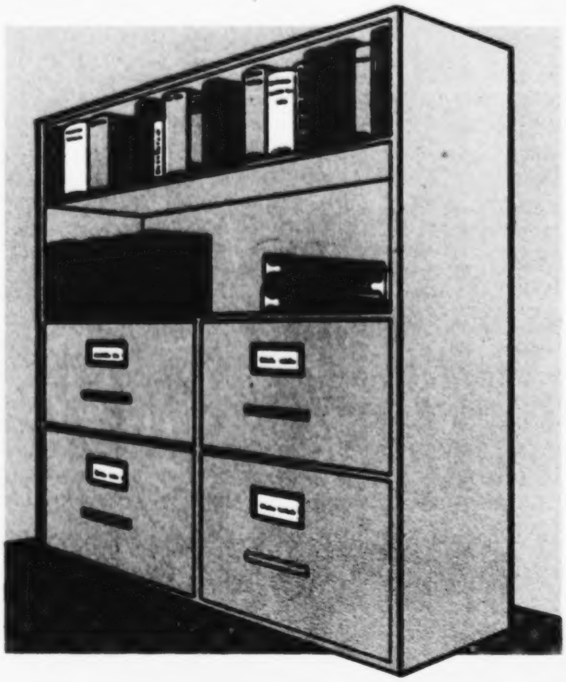
The following components make up a complete PBTE/CBSD resource center. The arrangement, organization, relative size, and overall design of the components may vary widely from program to program, but all the components should be considered in planning a resource center.

- **Instructional materials repository**—Provision should be made for the storage and dissemination of instructional modules and other learning materials. Included in this latter category may be a wide variety of books, pamphlets, selected readings, videotapes, audiotapes, filmstrips, slide/tapes, films, and their associated hardware.
- **Individual study stations**—Because the modules involve a considerable amount of independent study, carrels or tables—in a quantity proportionate to the number of learners—should be available.
- **Work tables**—Tables are needed for a variety of purposes related to the learning activities, including instructional materials production, project work, and construction of displays.
- **Videotaping studio**—Videotaping is of great importance in evaluating many of the teacher competencies in the PBTE/CBSD program. If possible, the studio should provide the basic facilities of a small classroom (e.g., chalkboard, projection screen, teacher's desk, chairs for a small group of students), as well as space for the necessary videotaping equipment itself. Large teacher education programs might need more than one studio.
- **Videotape playback and audiovisual viewing area**—The resource center should include an area that can be used to view prepared videotapes or to critique teachers' taped performances. The latter function requires a reasonable amount of privacy to allow teachers and resource persons to work and confer. The same area can be used by learners to view slide/tape presentations and other audiovisuals.
- **Seminar rooms**—Flexible, multipurpose rooms are needed for small-group discussions, practice activities prior to actual performance, and evaluation sessions.

As the PBTE/CBSD program is started up, the resource center may initially have to be a part of an existing facility (e.g., library or curriculum laboratory). Obviously, using a main library can create problems with communication, scheduling of events, and accessibility. Good planning may help minimize such difficulties.

Another option is to use a cluster of small standard classrooms—furnished with suitable conference tables, worktables, and comfortable chairs—as seminar rooms, multipurpose workrooms, and performance practice rooms. Study tables can even be set up in a departmental office area, videotaping can be done in a small classroom, and modules can be stored in available file cabinets or in a well-organized storage closet.

Providing a resource center for inservice teachers in outlying off-campus areas can create some special problems. There are few recommendations for these situations that are generalizable, so each institution will need to work out its own solutions. It is sometimes possible to set up small regional resource centers in schools. In other programs, individual resource persons will need to take personal responsibility for getting materials to teachers when they require them. The problems involved may require some careful planning, but experience with field-based programs indicates that solutions are possible.



Equipment

The specific items of equipment needed in the resource center vary with the program and the institution. The learning experiences in the modules selected for the program will involve the use of specified equipment; the necessary equipment can, therefore, be derived from an examination of the resource list for the selected modules.

The amount of each type of equipment required will be determined by several factors, including the number of learners in the program and the extent of equipment use required (including estimates of peak usage periods). However, a program with ten learners does not necessarily need ten items (e.g., videotape recorders); not all learners will be using the equipment at the same time. Nor is it always necessary to acquire new equipment; it may be possible to use equipment belonging to other departments or agencies. An inservice professional development program, for example, might have access to videotape recorders already available in school centers.

Although each program will probably need a unique combination of equipment for its own use, the following types of equipment are generally required to equip a fully functioning resource center:

- Videotape or videocassette camera (preferably color), recorder, and playback equipment
- Audiotape or audiocassette recorder
- Slide/tape projector
- Overhead projector
- Duplicating machines (e.g., Xerographic copier)
- Shelving for books
- File cabinet(s)
- Tape storage cabinet(s)
- Individual study carrels or tables

Reference Materials

The National Center's modules are largely self-contained (i.e., required readings are provided within the modules), and with few exceptions, any outside readings are part of optional or alternate learning activities, which not every learner will choose to complete. However, learners completing the modules can benefit greatly from having access to additional reference materials that are directly concerned with and applicable to their specific occupational service areas.

Resource persons should suggest books and other printed materials for the resource center that are especially valuable in their occupational specialties. Examples of these materials are books that treat the generic subject matter contained in the modules from an occupational viewpoint, student texts for specific vocational-technical programs for use in lesson planning, reference manuals for technical information, and catalogs for supplies and equipment used in the occupation.

Resource persons should also supplement module content with materials that illustrate how a skill is performed in the geographic area in which the learner will be teaching. For example, in a CBSD program, the module on lesson planning could be supplemented with samples and explanatory handouts for the lesson plan format used in that school or college. Copies of state plans, state-developed curricula, and state guidelines for particular programs (e.g., co-op programs) should also be made available. Such materials allow the learners to apply the more-generic module content to their local situation.

Typically, a learner working on a particular module will reach a point where a specific reference is needed, will use that reference for a relatively short period of time, and having finished with it, will move on to the next activity. The use of any one reference will be intensive and short. Thus, it is best if the required, optional, and specialized references are permanently housed in the resource center, readily available to learners as they work through the modules. If the institution has a large number of commuting students, whose use of the resource center may be somewhat restricted, or if the program is designed for inservice teachers, duplicate copies of critical resources may be provided for circulation.

Studio and Classroom

A videotaping studio set up as a simulated classroom is a vital element in a PBTE/CBSD program. Videotapes can be made of microteaching sessions for assessment and self-assessment purposes. The studio may also be valuable to resource persons as they prepare videotapes for enriching instruction or serving as models of teacher performance.

By videotaping sessions in which they are practicing a skill, teachers can critique their own performance afterwards. Videotaping microteaching sessions in which peers are role-playing students and teacher performance is being assessed can also be very useful. Those responsible for assessing performance (e.g., peers or a resource person) can review the tape prior to completing the assessment forms if necessary. The tape can be used during feedback sessions to show the teacher specific examples of areas needing improvement. The teacher can self-assess using the tape. And, when teacher self-assessment does not agree with the assessment of others, the tape can be used as a reality check.

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A classroom regularly used by classes for part of the day can serve as the videotaping studio at other times. In that case, the videotaping equipment would need to be completely portable so it could be stored in another room when not actually in use, or secure storage space would have to be built into the classroom itself. The obvious disadvantages of such a setup can be minimized by close scheduling of the room's use and by the mutual cooperation of the users.

Management

Because of the wide range of activities that take place in a resource center, good management procedures are required to keep it functioning efficiently. There are books and journals to check out, prepared audio- and videotapes to control, taping sessions and group discussions to schedule, equipment to maintain, and modules to distribute. In particular, if the scheduling of learning activities in the various areas of the resource center is not well organized, it can lead to chaotic and frustrating conditions for all concerned.

Among the management devices that have been found helpful in PBTE/CBSD programs are the following:

- Schedule chart for the studio/classroom showing available hours, which teachers and/or resource persons can use to sign up for needed taping sessions
- Weekly "learning events calendar" showing a schedule of related campus and off-campus activities, such as discussion-group sessions, seminars, lectures, and interviews
- Bulletin board for official notices and where students can sign up for peer groups, transportation to field sites, and the like

The resource center must be available for use when the learners need it. Resource materials must be at hand, and resource persons must be scheduled at the center so that professional assistance and advice are available freely on a one-to-one basis. This means that the center should be open for use all during the day. Where there are commuting students or inservice teachers in the program, evening hours are probably also necessary.

Space Needs

The space requirements for the PBTE/CBSD program can be inferred in part from the preceding section on the resource center. The **amount** of space will, of course, be greatly affected by the enrollment in the program, but the **type** of space required will be just about the same for all PBTE/CBSD programs and quite different in many ways from the space needs of a conventional teacher education program. The conventional formal classroom, the large lecture hall, and the isolated faculty study are not very desirable for PBTE/CBSD.

Resource persons in the PBTE/CBSD program will require some form of **office space** in or near the center of learning activity. The office should be accessible and spacious enough for conferences and work sessions involving individuals or small groups of learners. Some type of worktable or small conference table would be of great help. The resource person will generally use the office not only for teacher consultations but also for professional study and for the preparation of PBTE/CBSD materials.

One or more **seminar rooms** are needed for group study of modules, group-discussion sessions, and teacher practice. Some PBTE programs form teams of students under the leadership of a resource person, and these teams meet weekly to discuss the modules, air their problems, and help each other find solutions. Some form of seminar room with a conference table and/or comfortable seating is very desirable for this group work. The room can serve as the "home base" for the group and would be the place to display teachers' work. Ordinary classrooms located near the resource center can serve as seminar rooms if they are arranged informally.

Some **word processing equipment** can be an important asset to any PBTE/CBSD program. With this, learners can produce high-quality lesson plans, handouts, and other kinds of written documents. Equipment with graphics capabilities would offer even more versatility, making it possible for learners to construct charts, diagrams, and technical drawings for instructional applications. Word processing hardware and software should be chosen for ease of learning and use.

Some of the National Center's modules require the design and construction of displays, exhibits, and projects. An **open area** in or near the resource center for displaying these products will enhance the effectiveness of such learning activities. The open area should be located where all learners can see, critique, and enjoy the results of other learners' efforts. The area should be comfortable and attractive in appearance and well lighted. A lobby, spacious hallway, or lounge area could easily be set aside as a display area.

It would be extremely helpful if a simple **workshop facility** for project construction were provided. An ordinary classroom, stripped of its chairs and furnished with worktables or benches, would be adequate. Alternatively, arrangements could be made to use an existing industrial arts or vocational-technical shop or lab for constructing projects.

Staffing

Staffing for PBTE/CBSD learning facilities will also vary with the size of the program, but it is likely that a minimum of one additional staff member will be required: the manager of the resource center. Such a person may be able to take care of most of the daily routines of the program, with some extra help provided in order to keep the facilities operating in the evenings or on weekends. This position does not require the training of a media specialist or professional librarian, though some experience in both of those fields would be helpful. Student assistants in university-based preservice programs may work out well.

Routine scheduling, record keeping, and housekeeping can be done by a clerical worker. The recording of videotapes can be the responsibility of a separate technician. In small programs, learners can take turns videotaping each other, or videotaping can be handled by a pre- or inservice teacher with special interest and some training in this area. High-level technical and creative skills are not required, but dependability and punctuality are highly desirable qualities in a videotape operator.

The program director should not overlook the possibility of holding down operating costs by using part-time student help. Students may be available from a work-study program, for example, at little cost to the program. In any case, the staff of the learning facility should be directly responsible to a designated senior staff member, faculty member, or the program director.

Program Costs

When teacher educators and administrators begin planning to establish a PBTE/CBSD program, some of their first questions and concerns are those related to costs: How much will such a program cost? How does a PBTE/CBSD program compare with a conventional program in terms of costs? How can we deliver a good PBTE or CBSD program and yet keep costs down? These questions deserve some answers, and there are some general responses but very little hard data.

There are great differences in the characteristics of existing PBTE and CBSD programs; their developmental processes have been quite different, the settings in which they operate are unique, and their funding bases are varied and complex. The financial requirements vary depending on whether the program is large or small and whether the concern is with developmental costs or operating costs. It is important, therefore, that each institution make its own estimates of program costs—as accurately as possible—as planning goes forward.

A number of characteristics of PBTE/CBSD programs affect costs:

- Instructional materials and methods tend to be individualized and personalized. Though these characteristics are highly desirable, they may raise operating costs.
- Providing low teacher/resource person ratios involves higher costs than providing lecture courses in which teacher trainers deal with large groups of learners.
- Field-based teacher education programs generally cost more than conventional campus-based programs.
- Local school personnel may have a more significant role in PBTE/CBSD programs than in conventional programs. If local schools and colleges share responsibility for teacher training, university program costs will decrease.
- Management systems for PBTE/CBSD can be tied into the institution's present computer system and should involve no additional costs to operate.
- The cost of organizing and maintaining a resource center, along with its necessary equipment, can add to operational costs. However, experience has shown that these expenditures are usually absorbed by the general institutional or library budget.

Developmental vs. Operational Costs

There are two distinct types of costs that must be taken into account as the institution prepares to implement a PBTE or CBSD program. These are developmental costs and operational costs.

Developmental costs are the expenditures required to start the program, and they include such items as the following:

- Conceptualizing and designing the total PBTE/CBSD program
- Developing and/or assembling instructional materials
- Devising assessment techniques and instruments
- Developing the program's organizational structure
- Providing preparatory training for program personnel
- Developing a program management system

Operational costs are those needed to maintain the PBTE/CBSD program on a routine basis. Much of the cost of operating a performance/competency-based program will be similar to that of operating a conventional program. Costs for the basic physical plant, administrative services and overhead, student personnel services, and such items, remain very much the same for all programs. Some PBTE/CBSD operational costs for requirements that go beyond those for conventional teacher education programs were mentioned earlier. There may be some offsetting operational savings when learners purchase their own instructional materials, study independently, and work in unsupervised groups.

Programs using the National Center's PBTE/CBSD modules are spared the developmental costs of instructional materials. The substantial costs of competency identification and verification and module development, testing, and revision have been met by the U.S. Office of Education, The National Institute of Education, and the publishers. The implementing institution can also benefit by the technical assistance available from the National Center concerning PBTE and CBSD.

Most institutions ask learners to purchase the modules much as they would require the purchase of traditional course textbooks. Generally speaking, the cost to the learner for modules is comparable to that for the textbooks they replace. Learners fully utilize the modules and tend to keep them for future reference, so they get full value for their money. If the modules are properly selected and fully used, there should be few complaints from learners about costs. Bookstores are able to order, stock, and distribute modules just as they do texts, so their profit margins should not decrease.

PBTE Costs

Faculty loads. The question of faculty load in a PBTE program deserves careful consideration and planning. Because the program is more learner-centered and personalized, faculty contact hours are usually increased, and the number of learners that any one resource person can handle is limited. Actual assessment of teacher performance consumes a greater amount of time than does grading in conventional courses.

Offsetting this, to some extent at least, is the fact that the resource person has less need for lengthy preparation of lectures and examinations. Experience indicates that if faculty are doing a **conscientious** job in delivering a conventional teacher education program, a comparable amount of time and energy will be required for delivery of instruction to the same number of students in a PBTE program.

Field-based program costs. Field-based teacher education programs have some special costs that must be budgeted. The most obvious are the travel costs involved when itinerant teacher educators work with instructors out in their own schools. Using senior university faculty in this capacity would be very costly, so it is ultimately more cost-effective to use graduate students if they are available. Graduate students in vocational-technical education are unaffected by tenure and fringe benefits and are often willing to forgo immediate rewards to gain knowledge and experience that will be valuable to them in the future.

The costs involved in training itinerant (or field) resource persons and resident (school-based) resource persons must be figured as an operational item. Directors of programs that are completely field-based, with no campus activities, contend that a single resource person is able to work with no more than 15 to 20 learners. This is particularly true in areas of sparse population, where teachers-in-training are many miles apart and travel times are great.

CBSD Costs

CBSD programs have their own cost considerations. An institution-based program model, in which the school or college assumes total control of the program, requires certain personnel: a full- or part-time CBSD coordinator, and depending on the size of the institution, additional resource persons and a clerical worker. However, a single secondary or postsecondary institution may not have adequate personnel to conduct a complete program and may need to draw on the expertise and breadth of experience of university faculty. This, of course, may not be possible for schools or colleges with limited resources.

Other than staff, and perhaps consultants, the cost of a CBSD program should be minimal. Space for a resource center and media equipment can almost certainly be provided within existing facilities. Instructional materials, including audiovisual materials, entail a modest initial outlay. If possible, it is very desirable for the institution to furnish instructors with personal copies of the modules they are working on. If this is beyond the school budget, there are two workable alternatives: (1) provide one or two complete sets of modules in the resource center, where faculty members can use them or (2) ask faculty to purchase their own modules, either through the school bookstore or directly from the publisher.

NOTES

Chapter III

COLLEGE & UNIVERSITY TEACHER EDUCATION PROGRAMS: PBTE

Performance-based teacher education (PBTE) had its original impetus in college/university programs for the training of elementary teachers. It has developed far beyond that limited focus and is now operating successfully in a variety of forms in many settings. Campus-based PBTE programs may involve only a few courses or may constitute the entire professional component for a baccalaureate degree. Four-year colleges and universities may also provide specially designed campus-based PBTE programs for certification only (i.e., for teachers coming into the profession directly from business and industry who need a teaching credential but do not plan to attain a degree).

There are also widely respected PBTE programs that are field-based. In these, teachers are already employed in the schools, and the university (or college) brings the certification program to them. The university delivers instruction through use of university resource persons and teacher education modules, and it also serves as the credentialing institution.

Elements of PBTE are also found at the graduate level in vocational-technical teacher education programs. Modules on advanced or specialized teaching techniques, program planning, and supervision usually form the nucleus of such programs.

Thus, vocational-technical educators can use the PBTE approach to meet their professional needs throughout their careers, from the very beginning (certification) to the time when they are aspiring to the highest responsibilities.

Selection of Competencies

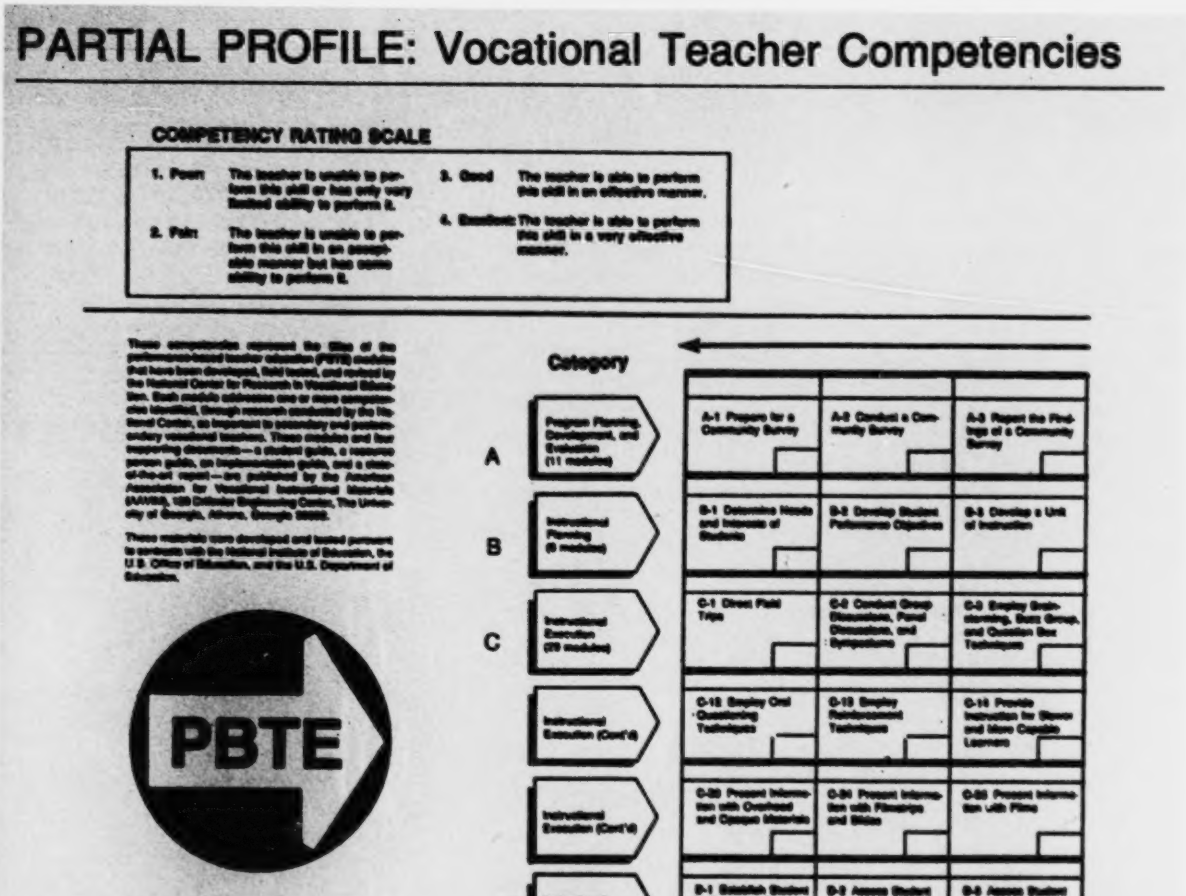
Selecting competencies for inclusion in the teacher education program is crucial to the entire process of program design that follows. This important task must be afforded the time, concern, and intellectual rigor it deserves. Teacher competencies, in this context, refer to the skills or tasks that teachers are required to perform as part of their professional role, as well as the associated knowledge and attitudes needed for effective performance.

Many procedures and models have been used in recent educational research to identify essential teaching behaviors or skills. These include occupational (or job) analysis, models of teaching and learning, analysis of teacher effectiveness research, and consensus studies of effective teaching. In developing its list of competencies for technical and vocational instructors, the National Center employed what are basically consensus study methods. (A detailed description of the research procedures is included in the *Resource Person's Guide.*)

Briefly, in a series of projects undertaken by the National Center, the identified competencies (which were called at the time *performance elements*) were incorporated into instructional modules. Each module delivers on one or more of the competencies, which were grouped on the basis of topical relationships and instructional logic. A complete listing of the 132 module titles, organized by categories, is presented on the back cover of this guide, as well as in the Vocational Teacher Competency Profile charts that are available as part of the module series (see sample 4 for a partial profile). (For a listing of the competencies included in each module, see the *Resource Person's Guide.*)

The starting point, then, of an institution's effort to plan its PBTE program could be an examination of these competencies and modules. Decisions about their inclusion in the proposed program should be made in the light of the needs of the learners, the requirements of the profession, and the resources of the institution itself.

SAMPLE 4



PARTIAL PROFILE: Vocational Teacher Competencies

COMPETENCY RATING SCALE

1. Poor:	The teacher is unable to perform this skill or has only very limited ability to perform it.	3. Good:	The teacher is able to perform this skill in an effective manner.
2. Fair:	The teacher is unable to perform this skill in an acceptable manner but has some ability to perform it.	4. Excellent:	The teacher is able to perform this skill in a very effective manner.

These competencies represent the titles of the performance-based teacher education (PBTE) modules that have been developed, field tested, and revised by the National Center for Research in Vocational Education. Each module addresses one or more competencies identified, through research conducted by the National Center, as important to secondary and postsecondary vocational teachers. These modules and four supporting documents—a student guide, a resource person guide, an implementation guide, and a state-of-the-art report—are published by the American Association for Vocational Instructional Materials (AAVIM), 120 Driftmier Engineering Center, The University of Georgia, Athens, Georgia 30602.

These materials were developed and tested pursuant to contracts with the National Institute of Education, the U.S. Office of Education, and the U.S. Department of Education.

PBTE

SUPPORTING MATERIALS

Implementation Guide . . . for Performance-Based Teacher Education & Competency-Based Staff Development Programs, Second Edition, by Glen E. Fardig.

Resource Person's Guide . . . to Using Performance-Based Teacher Education Materials, Second Edition, by James B. Hamilton.

Student Guide . . . to Using Performance-Based Teacher Education Materials, Third Edition, by Robert E. Norton, May W. Huang, and Lois G. Harrington.

Performance-Based Teacher Education: The State of the Art, General Education and Vocational Education, by Robert E. Norton, Lois Harrington, and Janet Gill.

Developed by:

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
1960 KENNY ROAD • COLUMBUS, OH 43210

Published by:

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FOR VOCATIONAL
INSTRUCTIONAL MATERIALS
The National Institute for Instructional Materials
120 Driftmier Engineering Center
The University of Georgia
Athens, Georgia 30602

	Category			
A	Program Planning, Development, and Evaluation (11 modules)	A-1 Prepare for a Community Survey	A-2 Conduct a Community Survey	A-3 Report the Findings of a Community Survey
B	Instructional Planning (6 modules)	B-1 Determine Needs and Interests of Students	B-2 Develop Student Performance Objectives	B-3 Develop a Unit of Instruction
C	Instructional Execution (29 modules)	C-1 Direct Field Trips	C-2 Conduct Group Discussions, Panel Discussions, and Symposiums	C-3 Employ Brainstorming, Buzz Group, and Question Box Techniques
	Instructional Execution (Cont'd)	C-12 Employ Oral Questioning Techniques	C-13 Employ Reinforcement Techniques	C-14 Provide Instruction for Slower and More Capable Learners
	Instructional Execution (Cont'd)	C-20 Present Information with Overhead and Opaque Materials	C-21 Present Information with Filmstrips and Slides	C-22 Present Information with Films
D	Instructional Evaluation (6 modules)	D-1 Establish Student Performance Criteria	D-2 Assess Student Performance: Knowledge	D-3 Assess Student Performance: Attitudes
E	Instructional Management (10 modules)	E-1 Project Instructional Resource Needs	E-2 Manage Your Budgeting and Reporting Responsibilities	E-3 Arrange for Improvement of Your Vocational Facilities
F	Guidance (5 modules)	F-1 Gather Student Data Using Formal Data-Collection Techniques	F-2 Gather Student Data through Personal Contacts	F-3 Use Conferences to Help Meet Student Needs
G	School-Community Relations (10 modules)	G-1 Develop a School-Community Relations Plan for Your Vocational Program	G-2 Give Presentations to Promote Your Vocational Program	G-3 Develop Brochures to Promote Your Vocational Program
H	Vocational Student Organization (6 modules)	H-1 Develop a Personal Philosophy Concerning Vocational Student Organizations	H-2 Establish a Vocational Student Organization	H-3 Prepare Vocational Student Organization Members for Leadership Roles
I	Professional Role and Development (8 modules)	I-1 Keep Up-to-Date Professionally	I-2 Serve Your Teaching Profession	I-3 Develop an Active Personal Philosophy of Education
J	Coordination of Cooperative Education (10 modules)	J-1 Establish Guidelines for Your Cooperative Vocational Program	J-2 Manage the Attendance, Transfers, and Terminations of Co-Op Students	J-3 Enroll Students in Your Co-Op Program

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Usually, it is most practical and convenient to work with module titles in the selection process, because they represent research-identified teacher competencies organized into readily manipulated units of instruction. Although the teacher competencies have been identified through research, however, the final selection and organization of those competencies must be derived from the values and professional judgments of the implementing institution's faculty and staff.

Preservice Degree Program

It must be remembered throughout the process of selecting competencies for a preservice degree program that the competencies selected should be those essential to a **beginning** teacher—one entering the vocational-technical classroom as a professional for the first time. It might be a great advantage if a beginning teacher were proficient in every single identified teaching skill, but that is just not possible, so some hard choices will have to be made. The competencies represented by the 132 module titles should be considered as **lifetime** professional skills, to be acquired over a period of time. Thus, some skills should be included in the teacher's preservice program; others should constitute a goal for the experienced inservice teacher.

Almost all PBTE programs identify a series of core competencies that will be required for teacher certification. The required core is selected on the basis of the best professional judgment of the college of education faculty and the state's teacher certification requirements. These competencies constitute one area of the total degree program: the professional preparation area.

The university will very likely also have requirements for courses in the humanities, physical and natural sciences, social sciences, and student teaching. Some vocational-technical teacher education programs provide technical training (business and office teacher education is a typical example). Others expect the prospective teacher to have already acquired the necessary occupational skills and award college credit when the learner documents occupational proficiency through licensure or by passing a test, such as one of those developed through the National Occupational Competency Testing Institute (NOCTI).

There is no single best procedure for identifying required professional competencies. However, the diagram of the program development process shown in sample 5 presents a thorough and practical series of steps that can be applied, as follows, to almost any institution's vocational-technical teacher education program.

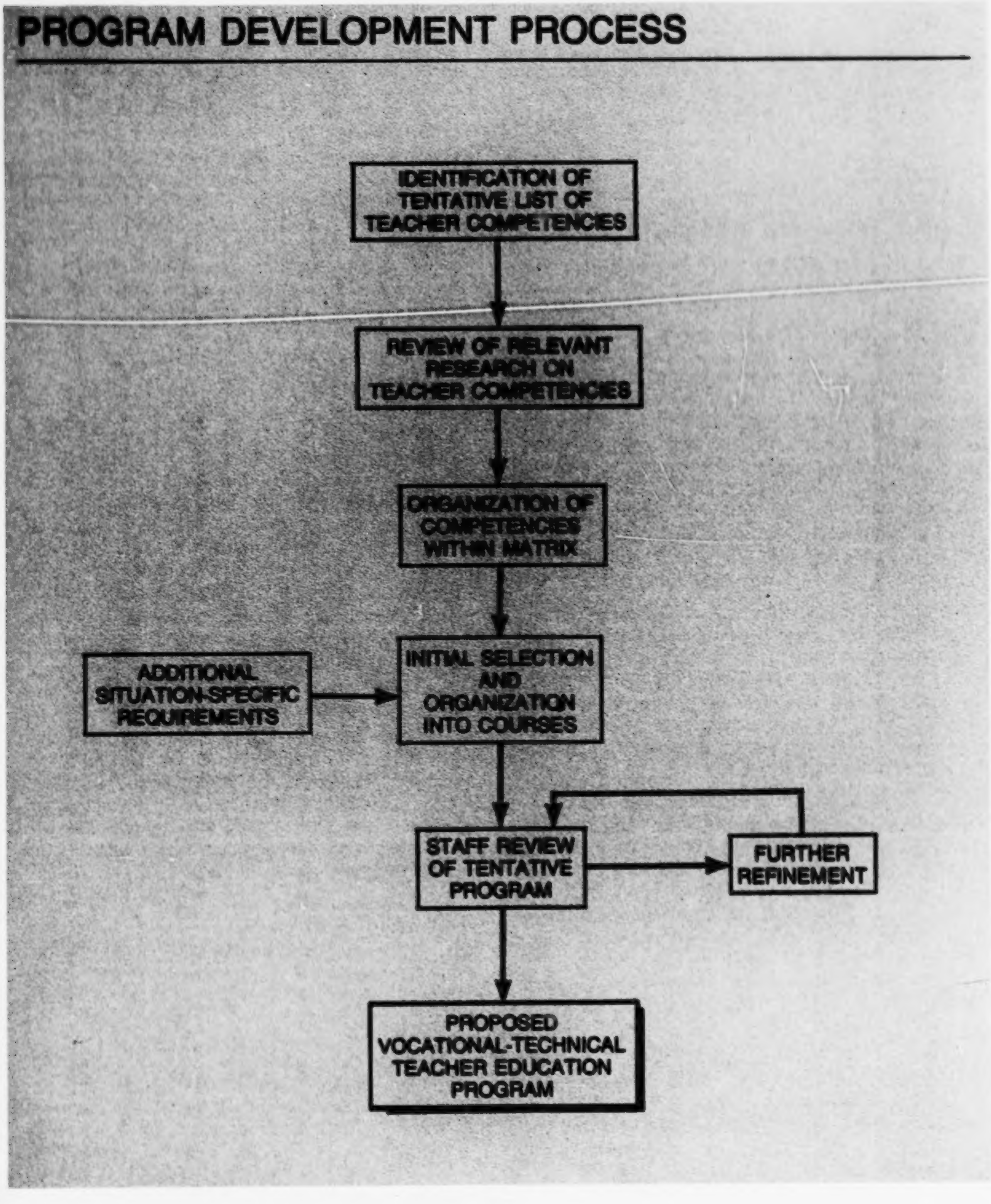
Step One: Identify tentative list of teacher competencies. The competency list should be developed on the basis of the known needs of teachers, current educational trends, expectations of schools hiring graduates of the teacher education program, and the professional judgment of the teacher education faculty. Consider questions that could affect the curriculum; for example: Do local vocational-technical programs use a conventional or competency-based approach to instruction? Is there a professional examination for which graduates must be prepared? Use a variety of current sources of information about teacher education to help identify a comprehensive competency list.

Step Two: Review research on teacher competencies. Find out whether recent research studies provide information on the specific training needs or competencies expected of beginning teachers. For example, are there research results that identify teaching skills unique to health occupations instructors? What does teacher effectiveness research have to say about the importance of voice and body language? Refine the tentative list of competencies in the light of research findings to increase its currency and validity.

Step Three: Organize nominated competencies in terms of priorities. Since a beginning teacher cannot be expected to be proficient in every teaching skill, some strategy for selection must be used. The matrix shown in sample 6 provides a graphic way of dealing with priorities and constraints and how they relate to each other. In applying the matrix, group each of the nominated competencies into one of the four cells. The competencies required for the preservice program should be mainly those that fall into the upper-left cell.

In addition to the required core of modules, most programs will include an elective list of modules from which learners can choose. Usually derived from the competencies that fall in the lower-left cell of the matrix, elective competencies are those considered to be highly desirable but less than essential at this stage of the teacher's development (e.g., conducting an open house or maintaining a filing system). Learners can select competencies from the elective list on the basis of their probable teaching assignments, professional plans, and personal interests.

SAMPLE 5



PROGRAM DEVELOPMENT PROCESS

IDENTIFICATION OF TENTATIVE LIST OF TEACHER COMPETENCIES

REVIEW OF RELEVANT RESEARCH ON TEACHER COMPETENCIES

ORGANIZATION OF COMPETENCIES WITHIN MATRIX

ADDITIONAL SITUATION-SPECIFIC REQUIREMENTS

INITIAL SELECTION AND ORGANIZATION INTO COURSES

STAFF REVIEW OF TENTATIVE PROGRAM

FURTHER REFINEMENT

PROPOSED VOCATIONAL-TECHNICAL TEACHER EDUCATION PROGRAM

SAMPLE 6

COMPETENCY SELECTION MATRIX

	competency must be taught in the preservice program	competency can be taught on an inservice basis
competency makes a greater contribution to teacher success		
competency makes a lesser contribution to teacher success		

Step Four: Identify situation-specific requirements. There may well be competencies that must be included in the program because of the unique requirements of the setting. The state or institution may, for example, require teachers to possess skill in the teaching of reading in the content area or in writing an individualized education program (IEP). It is wise to examine such requirements carefully to be sure that graduates can meet certification and hiring guidelines without difficulty.

Step Five: Select and organize competencies. Based on all the information gathered so far, an initial selection of competencies must be made. This is a crucial point in the process. For most PBTE programs, the competencies must also be organized into the familiar course structure—with recognized titles and designated credit hours—in order to satisfy university requirements, facilitate registration, and provide a convenient vehicle for instruction. Some field-based programs do not use a course structure; instead, they simply list the professional competencies to be achieved by program completers.

Two questions typically arise during this step: what constitutes a legitimate undergraduate vocational-technical teacher education program, and how much college credit should be awarded for completing the series of modules? Unfortunately, there is no definite and generally agreed-upon answer to either of these two questions because of the somewhat arbitrary nature of college course requirements and credits.

Rationally, the number of competencies to be achieved should be the number needed to ensure success for the beginning teacher, without regard to hours or credits. This is far more educationally defensible than designating a number of credit hours from minimum state certification guidelines and then filling those hours with what is supposed to be a fair amount of work.

Actual practice varies. One well-respected program prescribes 30 modules, which are to be completed within one year. Another university program lists 36 required and 9 elective modules, which are to be completed in a minimum of 18 months for 18 credit hours. A third program specifies completion of 38 modules for nine credit hours. Depending on their complexity, six to eight modules are typically included in a three-credit-hour course. It is best to adjust credits after some experience has been gained in operating the PBTE program.

For accreditation and program approval purposes, it may be necessary to justify the PBTE program in terms of traditional teacher education subject matter areas. Program approval guidelines typically call for a specific number of credit hours in foundations of education, learning theory, general methods of teaching, and special methods of teaching. Even if the PBTE program is not organized into these categories, the teacher education modules themselves deliver on the topics usually included in such conventional courses.

Through careful analysis of the competencies included in each of the selected modules in the program, it is possible to construct a matrix showing the conventional course names and the program modules that fit those categories. Some adjustment may be necessary, but ultimately a PBTE program can be devised that will satisfy program approval guidelines and yet maintain the integrity and structure desired of a true performance-based program.

Step Six: Review and refine the tentative program. Before the program can be finalized, it should undergo several cycles of review and refinement by the teacher education staff. The initial list of selected competencies should not be considered adequate. There should be open discussion about the competencies and their organization in order to expose inconsistencies, gaps, or differences of professional judgment, and the program should be modified accordingly. After a few review cycles, it should be possible to reach consensus.

Step Seven: Seek formal approval. The proposed PBTE program should then be organized on paper and attractively and clearly presented. It is then ready to go through the normal approval process, which varies at each college or university but which usually includes review and approval by the curriculum committee, dean, and undergraduate studies committee. Because PBTE is an innovative approach, those responsible for presenting the program to approval groups should have its details clearly in mind and be prepared for sharp questioning from their colleagues.

Implementation Patterns

The transition to PBTE requires a number of fundamental decisions to be made by the university (or college) contemplating this change. There are several basic patterns for installing PBTE, with countless possible variations. The PBTE approach can be installed partially or fully, incrementally or all at once. The program director needs to study the possible alternatives and—with group cooperation, if possible—determine a course of action. It is likely that each university's solution to program development will be unique.

It is helpful to start with a careful analysis of the local situation. There may be **facilitating elements,** such as an innovative faculty, a helpful administration, or organizational circumstances that provide an ideal opportunity to inaugurate an entirely new program. There may also be a number of **constraints,** such as a shortage of funds, a lack of cooperation by a local school system, or serious doubts on the part of faculty that PBTE is either desirable or feasible. Combinations of these factors will ultimately exert their influence to determine the speed of change, as well as the form, direction, and completeness of the resulting PBTE program.

A Functional Preservice Program

If one could establish a preservice PBTE program starting with a "clean sheet of paper," as it were, and incorporating all the essential concepts of PBTE in all aspects of the program, it would exhibit most of the following characteristics:

- The competencies to be achieved by learners are derived from research on teacher effectiveness and are organized for efficiency in instruction and learning.
- All learners are expected to demonstrate a central core of teaching competencies. Other designated competencies, while recommended, are negotiable and are considered optional.
- As learners progress through the PBTE program, their objectives may be modified on the basis of needs identified through personal development, success in the program, and experiences in actual teaching situations.
- Learners progress through the program at their own pace (e.g., based on their own learning styles and rate of achievement). Time is not a primary factor in determining progress; mastery of each competency is.
- Instruction and performance assessment are conducted using high-quality, tested materials, with learners and resource persons (e.g., teacher educators) free to design alternative learning experiences in order to foster acquisition of the necessary competency. Resource persons also provide enriching learning experiences, such as demonstrations, presentations, and observations.
- Regularly scheduled seminars of learners and resource persons are held to discuss mutual problems, share ideas, seek help, and improve interpersonal skills.
- Resource persons are readily available to help learners work through module learning activities, to suggest additional experiences, to critique learners' products and performance, and to help solve procedural problems.
- Secondary and postsecondary schools are an integral part of the teacher education program. Skilled practioners (teachers in the schools) are part of the teacher education staff and function as resource persons.
- Learners begin their field experiences in the schools early in their educational program. During field experience, they practice their teaching competencies and work on specific objectives.
- Assessment of teaching competence occurs in two stages: first, in a low-risk simulated setting; then—final assessment—in an actual teaching situation. A master teacher, school supervisor, or university resource person may assess learner performance.
- Learners and resource persons cooperatively determine when, and under what conditions, final teaching competence will be demonstrated.
- There is a record (e.g., written documentation, audiotape, videotape) of the learner's demonstration of teaching competence.
- Learners are granted degrees and recommendation for certification by meeting the university's standards for demonstrated teaching competence. Qualified school personnel assist university faculty in determining a learner's readiness for entry into the profession.

- Upon completion of the program, learners receive a standard teaching certificate and a special PBTE transcript. The special transcript, which is sent to prospective employers, includes (1) a complete record of the teaching competencies demonstrated and (2) evaluations by resource persons of the learner's performance of each competency.
- Results and outcomes of the instructional program are used to continually modify and improve the program. Learners use feedback on their efforts to enhance their own achievement. The teacher education program as a whole is changed and refined in the light of learner problems, learner achievement, and professional assessment. Identified teaching competencies are reviewed on the basis of research data.

Use of Modules within Existing Courses

The functional PBTE program just described attempts to incorporate all PBTE's intended advantages and to maximize its impact. Such programs, however, are not created overnight. The replacement or major modification of the existing structure of an established teacher education program is a major undertaking, involving the faculty, learners, and administration. All the problems of change and adjustment come at once and must be resolved rapidly and expediently.

Therefore, most teacher education programs start by applying the performance-based approach in a **limited** way. Perhaps just **one** teacher educator may begin using PBTE materials in **one** course on an **experimental** basis. As more experience is gained, more faculty and more courses can become involved, until success is assured and the program fully performance-based.

Teacher education modules may constitute a small or large portion of the work of the course. They may be used solely for supplementary individual assignments on discrete tasks. Part of the course may consist of conventional group instruction (e.g., lecture, discussion, projects) and part independent study of instructional modules. Or, all units within a course may be modularized.

Modules should be selected based on their appropriateness to the course objectives and their adjudged superiority to other methods of presenting the subject matter. They should not be used simply as outside reading assignments or as an attempt to reduce the load of the teacher educator (properly used, they will not reduce the load).

When PBTE modules are incorporated into the existing course structure, changes may however have to be made in the way they are to be used. New or modified learning activities may need to be developed for some modules. For example, rather than sending an individual learner out to interview a practicing teacher about a particular competency, it may be more practical to bring the teacher to the campus for a class presentation and group discussion. Instead of sending a learner out to observe and critique an actual vocational-technical shop/lab, it may be more practical for the class to observe the shop/lab via a slide show or videotape.

Furthermore, in a course structure it is usual for student teaching to be a separate, culminating component of the teacher education program. Thus, learners in the earlier courses may not be able to complete the final experience of each module—performance of the skill in an actual teaching situation—until student teaching. Yet, typically, a grade must be assigned for each course.

Consequently, college classroom simulations or videotaped performance may be used for initial assessment. Sometimes written products will serve in place of actual demonstrated performance. This is one step back from the reality of teaching, but it is far ahead of conventional lectures, textbooks, and examinations. The use of modules in existing courses may reduce the effectiveness of the modular approach somewhat, but it can make the transition to a more complete PBTE program relatively easy.

Use of Modules in a Service Area Program

A college or university with a teacher education program that includes preparation in several of the major occupational service areas might inaugurate PBTE by installing it in one or two of the areas (home economics or agriculture, for example). This allows a tryout of the program on a smaller, more manageable scale. When installation problems have been worked out, PBTE can then be expanded to other service areas. The National Center's PBTE modules are designed to be equally appropriate and applicable to all service areas.

The service area in which implementation of the PBTE program is to begin should be selected so as to maximize the program's chances for success. The program's attributes should include (1) a strong faculty, knowledgeable about PBTE, (2) a program chairperson committed to PBTE, (3) a good cooperative relationship with the corresponding local school program, and (4) cooperating school personnel who have the ability and training to function effectively as field resource persons.

The area of trade and industrial teacher education is especially suitable for pioneering the establishment of PBTE. Many trade and industrial instructors work toward their initial certification while they are already employed in the schools. Evening seminars can be scheduled, instructors can work individually on modules at times and places convenient to them, instructors can practice the teaching skills in their own classrooms and labs, and final assessment can usually take place in an actual teaching situation. The self-paced nature of such programs and the fact that the modules are basically self-contained and do not require frequent access to a professional library particularly appeal to working teachers.

Distance Education and PBTE

In many teacher education programs, training is not confined to formal classes meeting on campus. The university's responsibility for teacher education may encompass the local metropolitan area, a specified region or number of counties, or even an entire section of the state. Delivering instruction to individuals outside the main campus has usually been difficult and costly and, in some cases, less than satisfactory. Trainees are scattered geographically, professional libraries may be inadequate or nonexistent, and teacher educators are drained from long hours on the road. Furthermore, only a limited number of courses can typically be offered because classes of a reasonable size must be formed.

By using a PBTE approach, some of the problems of off-campus (or distance) education can be solved. Because teacher education modules are self-contained, there is less need to maintain an extensive professional library for learner use. The nature of the materials makes it possible for teachers in training to do a great deal of study and practice independently, at home or in their own school, as time and convenience permit. They read the informational material, complete learning activities, practice the skills involved, and evaluate their own performance. Thus, a teacher educator can serve effectively as a resource person for many small groups working on different competencies. In brief, PBTE makes it possible to deliver the right kind of teacher training, at the right place, and at the right time.

But PBTE does have its own unique requirements that should be met if high-quality training is to be provided away from the main campus. Teacher education modules must be made readily available for learners wherever they are located. Personal guidance and assistance must be provided to individuals and small groups as they work to complete the modules. Perhaps most difficult to organize and maintain, the performance of each learner on each competency in the program must be observed and evaluated, and feedback must be provided to the learner. Finally, resource persons must be prepared not simply to give instruction in one or two courses at a time, but to assist learners completing a number of different modules in a variety of categories.

There are several devices and techniques that can be incorporated in a distance education program that will make it administratively feasible and instructionally sound. There is, however, no one pattern that can be more highly recommended than another, because conditions, requirements, and resources vary enormously from one setting to another. The program designer is well advised not to be bound by traditional ways of providing off-campus instruction; this is an opportunity to look at the problem afresh, with the goal of making the process more efficient and the results more satisfactory at the same time. The following are some of the options that should be considered.

The function of the resource person. Teacher educators serving as resource persons in an outreach PBTE program can, of course, conduct formal courses in an outreach center much as they have always done. For example: A rotating schedule of offerings leads to a certificate or degree, with each course (or courses) given one evening a week for, say, three clock-hours. The course content consists of a series of modules, which all members of the class complete. The class work consists of lectures, discussions, and group activities.

Two points must be considered in using this approach. First, in this organizational pattern, course offerings are severely limited for the teacher in training; it may, for example, take two years or more to deliver a complete cycle of courses. Therefore, a teacher who has specific teaching concerns may be unable to get appropriate training when it is needed. Second, it requires very tight class and time management for the resource person to ensure that all the instruction and evaluation required actually take place.

There is a modified form of outreach that has some important advantages. Instead of conducting one or two classes at a site, the resource person can deliver instruction in four to six subject matter areas (they might be called courses). Teachers in training who are working on the same series of modules meet together with the resource person at assigned times for discussion of the competency topic and assistance in completing learning activities. These sessions can therefore be intense and personal, with basic information coming from the module and, perhaps, additional readings.

With either of these two approaches—formal or modified course structure—assessment of learner performance involves the same constraints as with campus-based approaches: learners do not have access to an actual teaching situation within the facility. If the learners are inservice teachers, as is often the case however, conducting performance assessments should not be an insurmountable problem.

For example, paper-and-pencil competencies (e.g., developing a lesson plan or establishing guidelines for a co-op program) simply require a written product, which inservice teachers can develop with their own school setting in mind. For other skills, such as introducing a lesson, each teacher could perform the skill in his/her regular classroom or lab and submit a videotape of that performance to the resource person for assessment. Videotapes could be viewed and evaluated by the whole class or used as a basis for final assessment by the resource person. Observation and evaluation might also be accomplished by special arranged visits to the teacher's school.

A third instructional delivery strategy is to have no group meetings at the outreach site at all. The university teacher educator in this case serves as a *field resource person*, making regularly scheduled visits to enrolled teachers in a designated geographic service area. When the resource person arrives at a school, he/she conducts conferences with individual teachers and the school resource person assigned to them. It is helpful if the field resource person is provided with a conference room or office for this purpose. The conferences deal with determining progress made, discussing problems or questions related to specific competencies, and planning subsequent learning activities to be undertaken.

During the visit, the resource person may also evaluate a written product or observe and evaluate an actual classroom or lab performance. The teacher and field resource person might also view a previously made videotape and critique the teacher's performance. For convenience and efficiency, teachers in neighboring schools who are enrolled in the program may be asked to come to a central school for their conferences.

Individual instruction of the type described here does lose something of valuable group interaction but gains in terms of meeting the specific needs of teachers in a timely manner and allowing truly self-paced progress. A fourth strategy, however, would be to supplement the third strategy with periodic group-discussion sessions.

Use of school personnel. Most any off-campus teacher education program can benefit greatly by involving local school personnel in the process. There is much to be done, and school personnel have special qualities and abilities to contribute. It should be clear, however, that the university teacher education program has ultimate responsibility for the organization, management, and final quality of the program. These responsibilities cannot be delegated to others.

One very successful arrangement is to use experienced vocational teachers as school resource persons—often called *resident resource persons*. These individuals can be assigned to work with teachers in training, usually those who are actually employed as teachers and working toward initial certification. The resident resource person is available to provide assistance on a daily basis—to discuss problems, react to ideas, make suggestions based on experience, and observe in the classroom.

Typically, the resident resource person does not evaluate the teacher in training (and many union contracts specifically forbid it). However, when the field resource person comes for a conference with the teacher, the resident resource person is sometimes asked to attend. Obviously, it is highly desirable for the resident resource person to be completely familiar with the PBTE program and the teacher education modules, even to the extent of being a former participant in the program.

The selected resident resource person requires training if the job is to be done well. Training should include such skills as observing and diagnosing teacher performance and conferring effectively with teachers. Training and general instructions for resident resource persons might be given at a group meeting on the university campus at the beginning of the school year. Universities should expect to pay the resident resource person a modest honorarium for his/her services.

Other school personnel can also be usefully involved in the PBTE program, usually as *special resource persons*. A media specialist can assist teachers in developing skill in using audiovisuals, for example; an evaluation and testing specialist can help teachers working on modules on instructional evaluation. In isolated areas, an administrator or curriculum specialist may willingly serve as evaluator, using as a basis the Teacher Performance Assessment Form (TPAF) contained in each module. Again, these individuals should be furnished with copies of the appropriate modules and training for their expected roles. One efficient way to provide training is through a transportable package: printed information and videotapes that school personnel can use for self-instruction.

The technology. Readily available technology can make PBTE distance education a reality. Its complexity ranges from the readily available desk telephone to elaborate teleconferencing facilities with video capabilities. The chosen medium depends mostly on available resources.

To take the simplest situation first, the **telephone** can be used to deliver instruction to isolated individuals in remote areas, instead of requiring the learner to frequently travel long distances. The learner is first oriented to a selected series of PBTE modules in an initial meeting. Thereafter, the modules themselves provide the structure of instruction, and the learner works independently or in cooperation with others.

Regular telephone conferences are scheduled between learner and resource person; once a week works well. In these conferences, difficult points are clarified, questions are answered, progress checked, and assignments agreed to. The learner can initiate the conference at a specified time each week. Paying for a long-distance call (even a half-hour conversation) is a great deal cheaper than travel.

Written products and videotapes for critique and evaluation may be sent through the mails. It is desirable to have a final face-to-face conference at the close of the semester to evaluate results and plan for future work.

More complex is a **teleconference** involving a regular group of learners at a campus site, connected to individuals or small groups in outlying areas. In this case, the teacher educator conducts a seminar with the main group, with the others listening and contributing freely. PBTE modules make this possible in a way that conventional materials could not, but the resource person will need to learn a few new techniques to help the unseen students know what is going on and who is speaking and to encourage participation. As a variation, the teacher educator may conduct the seminar from an outlying site.

There are several levels of sophistication in the equipment that can be used.

- An extremely simple and inexpensive patch cord device can be used to connect a standard telephone to any available amplifier (such as in a tape recorder or projector).
- A set of voice-activated microphones for the main and outlying stations can be connected to a telephone handset, and an external speaker can provide good sound reproduction. This enables all participants to be seated around tables and speak and hear normally.
- Freeze-frame video requires special equipment, including a video camera, transceiver, and modem. This is an elaborate setup, but it provides not only sound but still video pictures (of the group, chalkboard, overhead transparencies, etc.) on a monitor at the outreach centers. An electronic chalkboard is another (expensive) option. All this is transmitted over regular telephone lines.

If a simple arrangement is selected, it can be handled by the teacher educator, using a telephone set in the seminar room. If there are several outreach centers involved, it is better to have the host institution's telephone operators make the necessary connections when the teleconference class is ready to begin. A few states have a central "teleconference bridge" facility that handles all the setup work.

Many schools now have **videotaping** capabilities, which can greatly increase the effectiveness of PBTE distance education. A teacher can make a videotape of his/her performance in the classroom or lab and send it to the resource person for critique and evaluation. Feedback can be provided by mailing the learner a marked TPAF, written notes, or an audiotape, or through a telephone conference. With techniques of this kind, quality teacher education is quite possible, even for those who are at great distance from the university.

PBTE for Business and Industry

Historically, colleges and universities have concerned themselves almost exclusively with the preparation of teachers for the public schools. The association of public schools and colleges of teacher education has been a close, cooperative, and successful one. In more recent years, however, there has been a great and growing need to train trainers for positions in business and industry.

PBTE programs and modules make it possible for universities (and colleges) to construct appropriate programs for such trainers without the cost and complexities of an entirely new course structure. Properly selected, PBTE modules can provide the instructional foundation for trainers. The crucial step is to analyze the training needs of trainers and to design a program of study focusing on those needs, rather than on traditional public school requirements.

Competency identification. The process of identifying competencies for the program should be done with a clean sheet of paper and an open mind. Although there will naturally be similarities between the program for industry trainers and the program for public school instructors, simply adapting an existing teacher preparation program could lead to compromises and inconsistencies. There are several effective strategies for identifying the competencies that trainers need.

One strategy is to gather information about training programs for trainers already in operation. One example is given in the appendix; other successful programs can be found in a range of institutions. Review the competency lists that have been produced, and compare the competencies to known local needs.

A second strategy is to survey training departments in local businesses and industries (e.g., banks, health service institutions, manufacturing corporations) to determine their trainers' needs. Either by a written survey instrument or through personal interviews, find out about such things as what kinds of training take place, the characteristics of the trainees, the technical expertise required of trainers, in what settings training takes place, the scope and depth of training provided, and the instructional skills perceived as being essential for the trainers. A careful analysis of this information should lead to a good tentative list of essential trainer competencies.

A third, and very effective, strategy is to conduct a DACUM occupational analysis to produce a chart of trainer competencies. The DACUM committee should consist of a representative group including incumbent business and industry trainers and training supervisors (and excluding teacher educators and instructors). The analysis sessions must be conducted by a trained and qualified DACUM facilitator. The resulting DACUM competency chart can then form the basis for the development of a degree or nondegree educational program that will have support and "ownership" among local business and industry personnel.

Whatever method is used to identify the trainer competency list, there will no doubt be some notable differences between it and the list for the public school teacher education program. Competencies in some categories (e.g., vocational student organization and coordination of cooperative education) will be entirely missing. Such competencies as developing student self-discipline and conducting an open house may also be omitted, but there may well be strong emphasis on all competencies involving instructional execution. The program developer should be prepared to explain these variations to university personnel unaccustomed to trainer training requirements.

Program Staffing

The staffing requirements for a PBTE program depend primarily on whether the program is campus-based or field-based. In either situation, there should be one designated person who has direct and daily responsibility for developing the program and supervising its operation. That individual may also be the department chairperson or may have specific charge of the PBTE effort full-time and have the title of PBTE program coordinator or director.

In campus-based programs, regular vocational-technical teacher education faculty serve as PBTE resource persons in addition to any other responsibilities, such as graduate instruction or research. Field-based programs may have more-complex, differentiated staffing, with senior teacher educators on campus, itinerant teacher educators in the field, and resident resource persons in the schools.

Training Requirements

Any venture as important and significant as establishing a PBTE program requires the understanding and commitment of the involved faculty and administrative staff. The PBTE model demands that staff members function in new roles, roles for which they may have limited previous training and experience. The total staff must be prepared for the new program, so some form of inservice training is needed.

There are three components of professional change and development that must be given attention:

- Training for new tasks and unfamiliar roles

- Preparation for teamwork and cooperative professional efforts
- Preparation for teacher educators to work as colleagues with school personnel and resource persons

In the first component of inservice training, university faculty and school personnel will need to be prepared to function in the role of resource persons. This requires a change from presenter or information-giver to that of advisor, counselor, facilitator, helper, model, and evaluator. (A description and explanation of the varied and crucial role of the resource person is found in the *Resource Person's Guide*. The guide itself can serve as a basic training manual for the resource person training program.)

The second component of professional development involves the preparation of the faculty to work as team members. The autonomy and semi-isolation sometimes maintained by the traditional teacher educator or teacher is not appropriate to active PBTE programs. Preparation for the cooperative role may not involve training in skills or knowledge so much as human relations training and supervised collaborative efforts.

The third component is preparation of resource persons to work with others in the educational community. College and university teacher educators need to be able to function as equals with local school personnel, school administrators, and state agency personnel. The strong field-based element of PBTE makes necessary mutual respect and open, working relationships.

In particular, the National Center's PBTE modules call for school/college cooperation in order to arrange for early student experience in the classroom and performance assessment in an actual teaching situation. Such cooperation cannot be expected to occur naturally but should be prepared for by the sharing of information and experience and by participating in cooperative tasks of increasing complexity.

Some teacher educators, by preparation and experience, may not be ready to function as resource persons. If they are products of conventional time-based programs, they may want to continue to function in ways more appropriate to conventional education. There also may be considerable personal risk involved in discarding the practices in which they have had success and in attempting the new practices required to function as effective resource persons. Then too, university standards for promotion, tenure, or merit pay may not take into account (or give adequate weight to) the duties involved in the resource person's role, yet the effectiveness of the resource person is crucial to the success of the PBTE program. For all these reasons, training is necessary.

Training Techniques

There are four sequential levels in the professional development of the resource person, and there are appropriate training experiences for each level.

Awareness. Initial experiences related to PBTE are usually what is required at the awareness level. A conference, workshop, or a retreat can offer an excellent setting for introducing the PBTE concepts. Distractions are minimal, and there is ample time for stimulating discussion and the exchange of ideas.

Information. At this stage, there should be opportunity to provide resource persons with additional or more detailed information, to clarify concepts for them, and to help them sharpen their understanding. A program of readings on PBTE can form an excellent basis for providing additional information, creating interest, and laying a foundation for productive discussion. Other learning experiences may include formal presentations by experts, informal talks, and group discussions.

Involvement. Resource persons not only must know about PBTE as a theoretical model or new technique, but must also be actively involved in exploring their own role in it. With involvement comes commitment, so it is wise to have resource persons participate in activities that lead them to discover the implications of PBTE for their own work with teachers in training. Resource persons can be asked to design their PBTE program, work out a management pattern for field experiences, write a handbook to orient teachers to the local program, or form college/school liaison groups to identify areas of mutual concern.

Specific role training. If there are several differentiated positions for resource persons within the PBTE program, specific training experiences may need to be provided for each role: itinerant resource person, campus-based resource person, and resident resource person. Outside consultants, who have had experience in programs that use a variety of resource persons, may be called in to assist with the inservice training program at this stage.

Training Plan

Having made the decision to implement a PBTE program and having made the commitment to provide inservice training, the PBTE program director needs to develop definite plans that meet the following guidelines:

- The individual who will head the staff development program should be clearly designated, his/her responsibilities should be established, and he/she should be provided with ample time to conduct the program.
- The assistance of qualified PBTE specialists and consultants should be engaged. A large institution or school system may find that it already has such people on its staff; otherwise, it may be necessary to obtain outside experts. In the case of the National Center's PBTE curriculum, it may be possible for the implementing institution to arrange for National Center staff to provide training assistance.
- Faculty and administrators should be allotted specific time for planning and training. Staff training should be initiated well ahead of the implementation of the program. Ideally, the inservice program should be begun prior to the start of the new school year and should continue throughout the year.
- The staff should be given enough time to make the necessary changes, such as acquiring resource materials, reorganizing physical facilities, and preparing additional instructional materials.
- A PBTE training workshop should be organized and its goals clearly spelled out so that participants know exactly what the outcomes are to be. The workshop might be two or three days in length. The National Center can be asked to conduct such a workshop, or consultants from a presently operating program can be used.

The overriding goal of PBTE is to prepare teachers who will help provide the best education possible for students. Reaching this goal takes more than high-quality instructional materials. It requires well-educated and sensitive teacher educators, dedicated to the task of using the materials in a creative and personal way.

Grades, Credits, and Record Keeping

PBTE requires that a new look be taken at traditional practices for grading, awarding credit, recording progress, and reporting final results. The procedures so well entrenched in higher education may have worked satisfactorily in the past, but they are not really appropriate for a fully functioning PBTE program. What will ultimately be needed is a system that is compatible with the principles of the new program.

Accepting a new system sometimes creates difficulties for administrators and clerical personnel, however. Administrators, for example, may find it difficult to accept the idea that it is possible for all PBTE students to be awarded a grade of *A*. Registrars may find that their present record-keeping systems are not set up to process the evaluation results for 30 to 50 modular units or to provide frequent readouts of learner progress.

The PBTE program director has the job of identifying what changes must be made in the existing system and convincing administrators and registrars that those changes are legitimate and are required in order to make the program operational. In a small-scale or beginning program, it is usually possible to make enough compromises to accommodate the new program within the present system. This will make things work and minimize the strains.

If the PBTE program retains the conventional course structure, there will probably be little need to change the reporting system. The National Center's PBTE modules can be employed as units of study within existing courses and thus become required learning activities for the course. Course grades can then be computed in the usual way on the basis of the learning activities that the learner has completed. Even in this limited application, the use of PBTE modules can greatly increase the objectivity of grading.

Record Keeping

A number of questions must eventually be answered if an efficient and helpful record-keeping system for a more fully developed PBTE program is to be devised:

- How will each learner's individual program be recorded?
- What will be done to ensure that information is readily available concerning where any learner is in the program at any given time?
- How and where will each learner's achievement of each competency be recorded?
- What kind of final record or transcript will be produced?
- How will module completion be correlated to the awarding of course credits?

Basic systems. There are some highly desirable characteristics of PBTE record keeping that should be incorporated even in a simple and basic system:

- The system should store a record of each learner's entire proposed program.
- The system must provide an accurate record of the professional teaching competencies the learner has mastered.
- The system should correlate competencies completed and credits awarded.
- The system should record dates of competency attainment to serve as progress checks.
- Learners should have access to their own records to determine their status.
- Resource persons need easy access to records in order to advise learners, plan their own work schedules, and analyze program results.
- Official records must be tamper-proof.
- It should be possible for resource persons to record entries quickly and conveniently, on any day of the school year.

The forms and records devised for the beginning PBTE program need not be elaborate, complex, or expensive. The record may be as simple as a one-page form for each learner, located in a file drawer or kept in a notebook. It should, of course, be carefully prepared to meet the informational needs of the program and to allow for quick recording of essential data.

One basic form that can be used by both learner and resource person is shown in sample 7. This form has proven useful as a day-to-day record of the learner's progress through a course and through the program. It can provide information for program planning and for advising learners. The module completion dates and rating averages can be readily transferred by the resource person to official records. The record also provides a reminder list of the products or performances required of learners for module completion.

Sample 8 shows a simple student record form that can be maintained in the university's official files. This form provides space for listing the required core modules and the optional modules included in the learner's program. As the learner masters the competencies and completes a module, the dates are entered and the resource person signs off on that module. For modules in which the learner fails to meet the minimal criteria, no entry is made on the form.

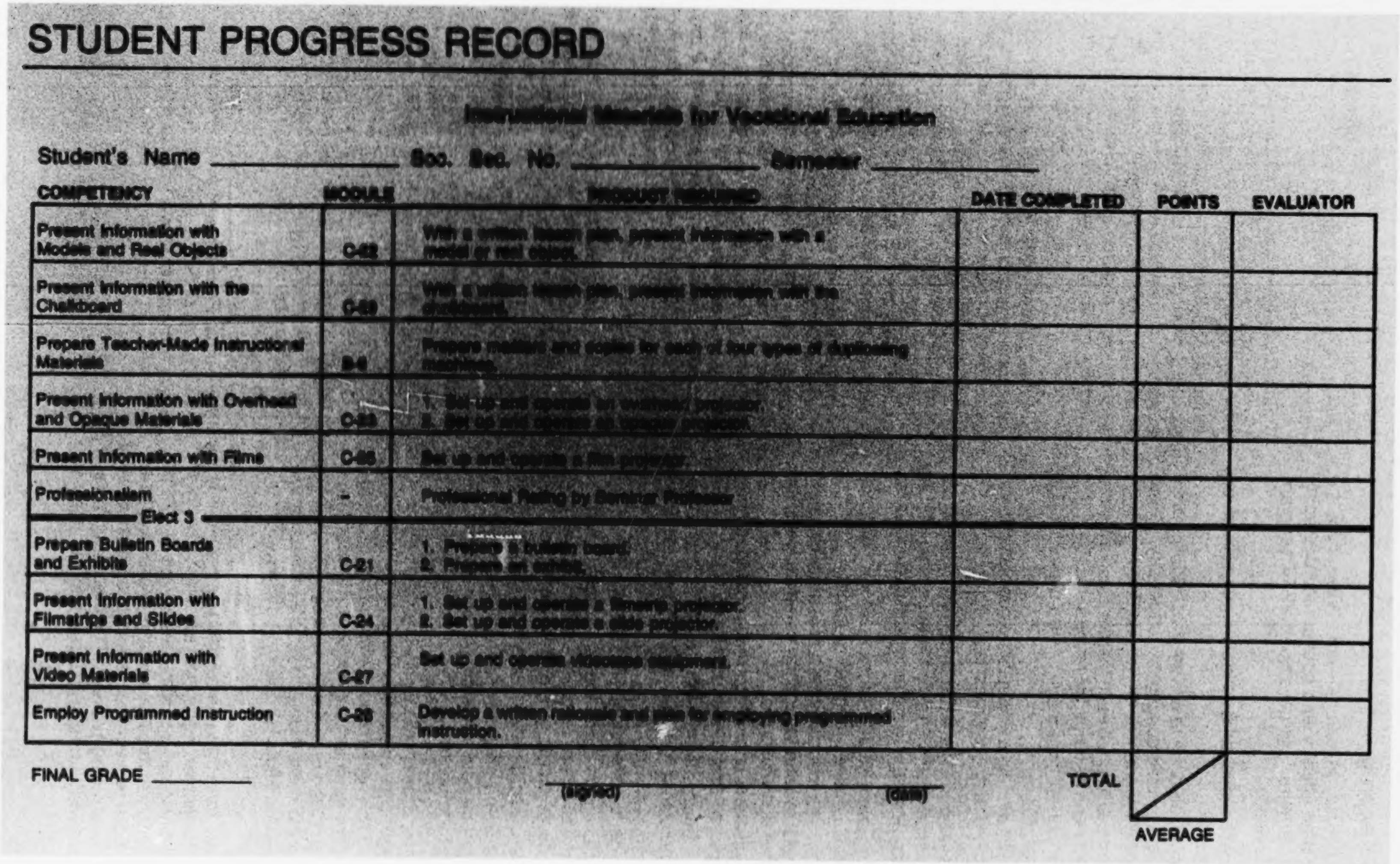
Although the form in sample 8 provides the minimum essential record-keeping information, it could be expanded according to the institution's needs. For example, a module could be broken down into its integral learning experiences and the completion dates for each recorded; or a credit value could be assigned to each module, and this could appear on the learner's transcript and other records.

The personal inventory card shown in sample 9 can be used to keep a record of each learner's complete program. The numbers of the modules to be completed are circled, and each resource person could use a separate color to indicate the modules that are his/her responsibility. A copy of the card can be used by learners to keep a record of their program and progress; another copy can be kept in a central 4" x 6" file as part of a comprehensive record of all learners in the program.

Another valuable document for the learner's record file is the Teacher Performance Assessment Form (TPAF). This is the final assessment instrument that is part of each module. The TPAF is the definitive document for each competency in that it records, as objectively as possible, the learner's actual level of performance and effectiveness. The TPAF can be readily removed from the module and filed, or an authenticated copy can be prepared for the file.

In a field-based PBTE program, it is desirable that a record be kept of the field resource person's work with the learner (teacher or instructor). Such information can be used by resource persons in planning schedules, making sure an equitable amount of assistance is given to each learner, and noting follow-up activities that should be done. Sample 10 shows a simple field report form that can be modified to make it specifically suited for its purposes.

SAMPLE 7



STUDENT PROGRESS RECORD

Instructional Materials for Vocational Education

Student's Name ____________ Soc. Sec. No. ____________ Semester ____________

COMPETENCY	MODULE	PRODUCT REQUIRED	DATE COMPLETED	POINTS	EVALUATOR
Present Information with Models and Real Objects	C-22	With a written lesson plan, present information with a model or real object.			
Present Information with the Chalkboard	C-29	With a written lesson plan, present information with the chalkboard.			
Prepare Teacher-Made Instructional Materials	B-6	Prepare masters and copies for each of four types of duplicating machines.			
Present Information with Overhead and Opaque Materials	C-23	1. Set up and operate an overhead projector. 2. Set up and operate an opaque projector.			
Present Information with Films	C-25	Set up and operate a film projector.			
Professionalism	–	Professional Rating by Seminar Professor			
Elect 3					
Prepare Bulletin Boards and Exhibits	C-21	1. Prepare a bulletin board. 2. Prepare an exhibit.			
Present Information with Filmstrips and Slides	C-24	1. Set up and operate a filmstrip projector. 2. Set up and operate a slide projector.			
Present Information with Video Materials	C-27	Set up and operate videotape equipment.			
Employ Programmed Instruction	C-28	Develop a written rationale and plan for employing programmed instruction.			

FINAL GRADE __________

____
(signed) (date)

TOTAL

AVERAGE

SAMPLE 8

STUDENT RECORD FORM

STUDENT'S NAME ______________________ I.D. No. __________

PROGRAM MAJOR ______________________

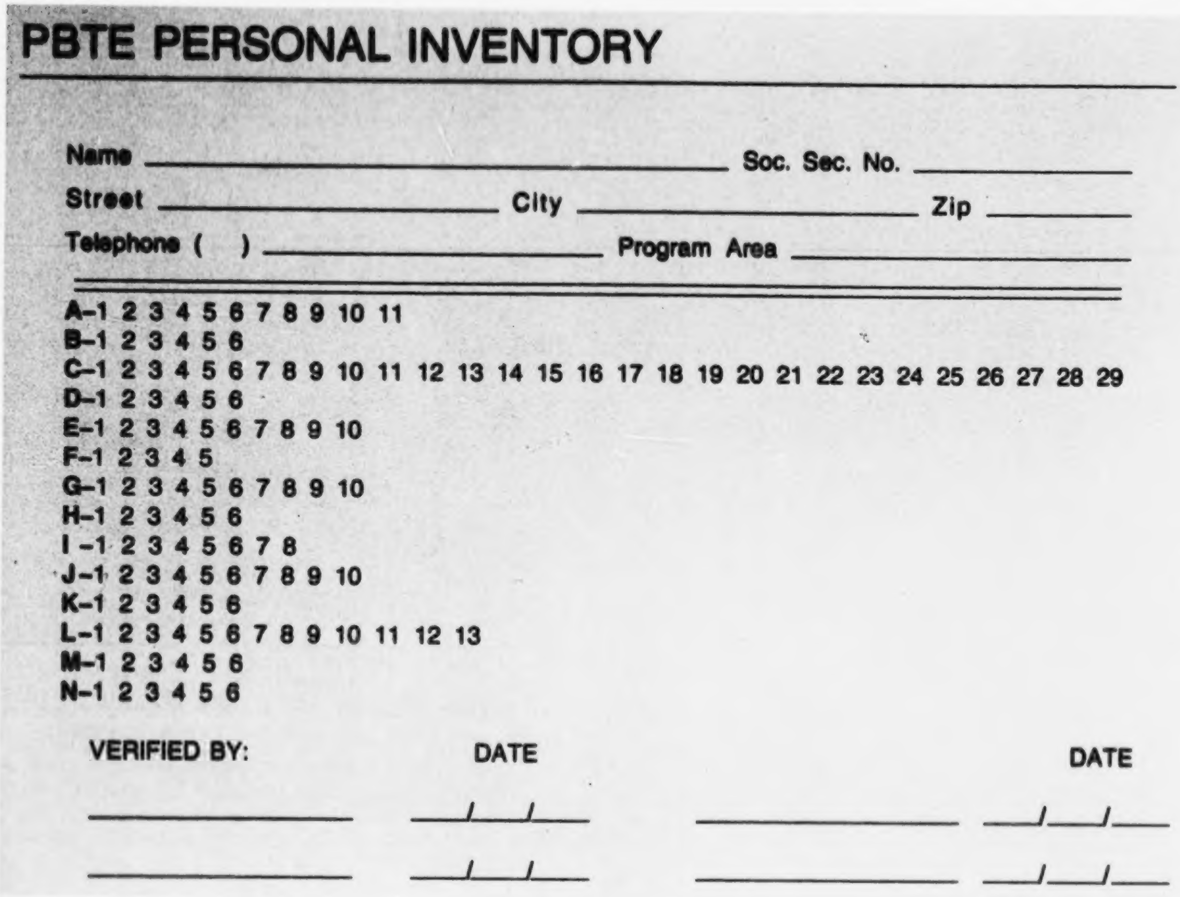
PROGRAM ADVISOR ______________________

REQUIRED MODULES

Modules	Brief Title	Date Initiated	Date Completed	Evaluation	Resource Person

OPTIONAL MODULES

SAMPLE 9



PBTE PERSONAL INVENTORY

Name ________________________ Soc. Sec. No. ____________

Street ______________ City ______________ Zip ________

Telephone (   ) ______________ Program Area ______________

A-1 2 3 4 5 6 7 8 9 10 11
B-1 2 3 4 5 6
C-1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
D-1 2 3 4 5 6
E-1 2 3 4 5 6 7 8 9 10
F-1 2 3 4 5
G-1 2 3 4 5 6 7 8 9 10
H-1 2 3 4 5 6
I -1 2 3 4 5 6 7 8
J-1 2 3 4 5 6 7 8 9 10
K-1 2 3 4 5 6
L-1 2 3 4 5 6 7 8 9 10 11 12 13
M-1 2 3 4 5 6
N-1 2 3 4 5 6

VERIFIED BY:	DATE		DATE
______________	___/___/___	______________	___/___/___
______________	___/___/___	______________	___/___/___

SAMPLE 10

FIELD REPORT FORM

TEACHER'S NAME ______________________ I.D. ________

PROGRAM MAJOR ______________________

SCHOOL BASE ______________________

FIELD RESOURCE PERSON ______________________

Date of visit	Activity	Minutes	Results of activity

The learner's permanent record in a PBTE program should probably consist of two documents. One should be a standard college transcript showing the usual records of courses taken in general education and technical education, including credits, course grades, and grade point average. Another document, related to the professional education curriculum, should consist of a listing of the required and optional modules completed by the learner, dates of completion, and resource person's evaluations and ratings. The Vocational Teacher Competency Profile (see sample 4, p. 30) could easily be modified somewhat for this purpose. A copy could be inserted in a suitable folder for presentation to the learner upon completion of the program.

Computerized systems. Computerized record keeping can be a great convenience for PBTE programs of most any size, although it is the position of the National Center's PBTE program staff that a computerized system is not essential to the successful implementation of PBTE. Such systems can do more than just keep vital records of learners' overall accomplishments. Depending on the needs of the program, they can record each step of learner progress, print special reports on learners who are not making expected progress, schedule learning activities and resource person loads, analyze the efficiency of each module, and much more.

Computerized record keeping can be tied into the university's mainframe, with convenient terminals in the resource persons' offices. Alternatively, an individual PBTE program may have a simple but efficient record-keeping system on its own microcomputer. Using the basic software now available, it is relatively easy to set up such a system.

Of special interest to vocational-technical educators is the computerized record-keeping system that has been developed by the vocational education department at Temple University for their VITAL (Vocational Intern Teaching—Applied Learning) program. Called the VITAL Management Information System (VITAL-MIS), it has capabilities for handling the records not only for all the modules in the National Center's PBTE curriculum but also for the traditional pre- and inservice programs, adult programs, and graduate programs.

The computer program can produce reports on demand, manipulating a great number of factors. It has proven invaluable for maintaining and reporting individual learners' records, as well as providing a wealth of program management data. More information on VITAL-MIS, the operations manual, and the computer program and its capabilities can be obtained from the developers.

Grading

The theoretical model for PBTE provides for evaluation based on the concept of mastery. Given a required series of modules covering essential teacher competencies, the learner either achieves each competency or recycles through necessary learning experiences until **successful** performance is achieved. Therefore, traditional letter grades (*A–F*) are not generally appropriate.

Learners are not compared with each other (norm-referenced assessment). Instead, teacher performance is evaluated in terms of predetermined standards or criteria (criterion-referenced assessment). Grades are not determined by their distribution along a "normal curve"; they are awarded on the basis of whether learners did or did not meet the critieria. A reporting system using criterion-referenced principles identifies the competencies the learner has mastered, not how well his or her work compares with that of peers.

During the transition from conventional to performance-based teacher education, however, establishing an appropriate grading system can be at least bothersome, and perhaps very difficult, because grading systems tend to become institutionalized and resistant to change. Most universities use a five-point grading scale, base grades on semesters or quarters of work, and use grade point averages as a basis in selecting graduate school candidates and in writing job recommendations.

In a fully developed PBTE program, there should be no failures and no bell-shaped curves. Learners' grades would tend to be *A* or *B*, and there would be increased use of *I* (incomplete or in-progress) grades to accommodate those who have not completed module requirements. It is a common situation, however, for a PBTE program to have to operate within the confines of the present, well-entrenched system. In that case, there are several options and alternatives that can be considered:

- Universities that have provision for pass/fail grading may be able to utilize the device for grading completion of competencies or modules. If this system is used, the definitions of *pass* and *fail* should be spelled out and made public.
- An *I* grade can be used, in addition to pass/fail, to indicate that the learner is working on a module (or group of modules) but has not yet achieved the accepted level of competence. The *I* designation can be used very freely to indicate that more time is needed. An *I* could be kept on the records for one year to permit learners to master the skill, and a permanent grade could then be substituted for the *I* to show completion.

- Learners can be allowed to work to complete the series of modules required for a given course without actually registering for the course until the requisite competencies have been achieved. Then, registration and awarding of credit for the course can take place simultaneously.

Awarding *A–F* letter grades in a PBTE program requires some forethought. When a group of modules is used as the equivalent of a professional course, the learner completes the learning experiences and then performs each competency in an actual school setting, and if the resource person is satisfied that the learner is competent, an *A* is awarded. University faculty and staff may, however, find it difficult to accept that all students in a course can have straight-*A* records. If so, *A* and *B* grades can be utilized in the system as follows:

- Award a *B* to the learner who demonstrates the competency satisfactorily and satisfies all the criteria.
- Reserve the grade of *A* for the learner who shows outstanding performance. The definition for *outstanding* should be based on the professional judgment of the resource person and should be made public in advance. The percentage of *excellent* ratings on the TPAF can be used as a criterion for awarding a grade of *A*.
- Use *I* for an incomplete effort or work in process.

One set of grading procedures that has proven very successful is shown in sample 11. In this system, module performance ratings are averaged to calculate a letter grade. The system also includes a professional rating factor that allows the teacher educator to express a professional judgment about the teacher's attitudes and behaviors. Note that the letter grade *D* is not used; any work or performance of this low a quality is not accepted, and the teacher is required to recycle. The letter grade *F* is available, but only for use in cases of serious unprofessional conduct (e.g., plagiarism, other illegal acts, or a terminated effort).

Student Credits

Awarding credits for modules completed is another task that requires some original thinking and perhaps some compromises. Ideally, the overriding consideration in determining that teachers are prepared for their professional role should be that they demonstrated competence. Amassing course credits toward a teaching certificate or college degree would have little importance in such a model. The realities of higher education and the requirements for certification, however, often require that the credit system be retained. There are some strategies that can resolve this apparent conflict:

- Assign each module a credit value. The value may be equal for all modules, or it can vary with each module's estimated difficulty or the time required for completion. The value of ¼ or ½ credit per module is being used by some institutions, with some complex and lengthy modules given a full credit value. Data about learners' average completion times for each of the modules should be gathered to develop fair values.
- Select a group of modules that include the same competencies as included in a conventional course. Successful completion of the modules is then considered equal to satisfactory work in the course and is awarded comparable credit (e.g., three semester hours).
- Translate full-time field experience into a group of "courses" taken simultaneously. During the field experience, the learner could demonstrate competence in a group of modules and be given credit for all the courses (e.g., 15 credit hours).
- Contract with learners for completing a series of modules. As the learner completes modules during professional preparation, the results could be duly recorded in the learner's file but no credit actually given. When the entire required core of modules is completed, a predetermined large block of credit is then recorded to meet certification and graduation requirements.

In summary, each university or college will need to make its own decisions about grades, credits, and record-keeping requirements. Few procedures will both fit the existing system and be intellectually defensible within the PBTE conceptual framework; adjustments will need to be made. The decisions, whatever they ultimately turn out to be, must be made clear in advance to the learners, resource persons, administrators, and registrars who are directly concerned. Users of the records (e.g., prospective employers and supervisors and graduate school entrance committees) should also have the system explained to them so that there are no mistakes in interpretation and so the system is not confused with more familiar systems.

SAMPLE 11

PBTE GRADING PROCEDURES: Undergraduate Program

The PBTE Program comprises Competency Clusters, with semester hours of college credit awarded for successful completion of each cluster. To award appropriate credit and a grade for each cluster, a grading scale with a description of each value has been developed. Each product or performance within a cluster is to be assigned quality points as per the Product Rating Scale Description. An additional factor, equal in weight to one module, will be the faculty member's judgment of the teacher's professionalism, as described in the Professional Rating Scale Description.

To compute a final grade, points assigned for each product or performance completed are totaled, points for the professional rating are added, and the result is divided by the number of competencies in the cluster, plus one. The computed value for the Competency Cluster is then assigned a final letter grade according to the following grading scale:

3.6 through 4.0 = A
2.7 through 3.5 = B
2.0 through 2.6 = C

Points	Product Rating Scale Description
4	The product or performance is at a level of proficiency such that it could serve as an example or model of excellence for other teachers. Meets all checklist criteria at the EXCELLENT level.
3	The product or performance is at a level of proficiency expected of a competent beginning teacher. It is satisfactory, meets all criteria on the checklist, but includes some minor deficiencies.
2	The product or performance is at a minimally acceptable level for a beginning teacher. It includes some significant deficiencies of conceptualization or presentation. Meets criteria on the checklist at a minimal level.

Points	Professional Rating Scale Description
4	The attitudes and behaviors of the teacher are fully professional. The teacher participates constructively in every seminar session, maintains a regular schedule of completed tasks, completes written products of a high quality, and demonstrates an enthusiastic and positive attitude toward teaching and learning.
3	The attitudes and behaviors of the teacher are those generally expected of a teacher in the profession. The teacher participates in most seminar sessions, usually completes tasks on schedule, completes written products of a satisfactory appearance, and demonstrates a generally positive attitude toward teaching and learning.
2	The teacher shows evidence of being minimally professional in attitude and behavior. The teacher participates infrequently, makes some contributions that tend to be counterproductive, and allows work to accumulate before completing it. The teacher's products have deficiencies in presentation and appearance, and there is some evidence of lack of a positive attitude toward teaching and learning.
0	There are serious questions about the teacher's professional attitudes and behaviors. The teacher should rethink his/her professional responsibilities and career goals.

Teacher Certification

At the present time, there is a great deal of discussion and activity in the area of teacher licensure and certification, and PBTE is certainly affected in many ways. There is an interesting trend throughout all of teacher certification: requirements are being stated in terms of competencies to be achieved rather than simply courses to be taken and credits acquired, even though the term *performance-based* or *competency-based* may not be used. Of course, PBTE is well in the forefront in that regard.

Another trend is what has been called "the rush toward teacher testing." Some 32 states now have state-required testing programs for those who aspire to become certificated and enter the teaching profession. A smaller number of states also test teachers for recertification or advanced certification. These tests cover the areas of general education (including such basic skills as reading, writing, and math) and professional education. A small, but growing, number of states have instituted beginning teacher programs in which certifcation is not finalized until an initial year of successful teaching has been completed.

PBTE programs cannot be totally responsible for the success of their graduates in all these areas, because the teacher education program constitutes only a relatively small part of the work toward a degree. Nevertheless, PBTE must contribute to the prospective teacher's preparation. Reading and writing skill development can be built into the learning activities of every module. Learners' written products can be critiqued and assessed in terms of professional standards. Learners' presentations can be used as an opportunity to teach oral communication skills.

The PBTE program must, of course, take major responsibility for the learners' success in tests of professional knowledge. Modules must be selected and seminar sessions used to strengthen learners' knowledge and understanding of educational facts, concepts, and practices, as measured by the tests.

It is essential that PBTE program developers and faculty be well versed in their state's certification standards. Not only must the program be designed to meet certification requirements, but instruction must directly assist students in passing tests and completing a beginning year of teaching successfully. In some universities, it may be necessary to establish remedial programs for prospective teachers who need to improve their basic skills.

Teacher educators and administrators should be members of or in contact with state certification committees to help ensure that accommodating the performance-based approach is given proper consideration in developing new certification rules and guidelines.

PBTE programs may operate within the structure of traditional certification standards or within new performance-based standards. Most states use an *approved-program approach* to teacher certification, in which the college or university files a document with the state department of education listing its series of teacher education courses and field experiences. When the program is approved by the state, its graduates are routinely certified upon application. Program approval is based on legislated standards or broadly interpreted policies of accrediting agencies.

The approved-program approach allows the state's teacher certification staff a great deal of latitude in approving experimental programs. Many PBTE programs now preparing teachers using the National Center's modules are doing so under an experimental program clause in certification standards. Programs initiating PBTE in a tentative way (for example, using modules within an existing course) can operate easily within existing certification requirements. Programs that are moving toward full implementation of PBTE, however, should prepare appropriate documentation for a "Program Approval Request" and submit it to the state department of education in cooperation with the college or school of education.

A Program Approval Request typically consists of (1) a list of the selected core of required teacher competencies, (2) a description of how learners will achieve these competencies (i.e., the instructional approach to be used), and (3) a description of the methods and procedures to be used in assessing the learners' level of competency achievement. The PBTE program director should also submit similar curriculum revision documentation to the curriculum committee in the college or school of education, to the university curriculum committee, and to the graduate school.

In addition to submitting formal documents, the PBTE program director should take the prudent step of conferring regularly and personally with the state's chief certification officer during the program design phase. Through this personal contact, the PBTE program can be explained and, if necessary, minor modifications can be made to ensure that the approval process proceeds smoothly. In reality, the teacher certification process should not interfere with the implementation of PBTE in an institution with accreditation credentials that are in good standing. Certification is one of the lesser problems to be faced when first implementing PBTE.

Chapter IV

INSTITUTIONAL STAFF DEVELOPMENT PROGRAMS: CBSD

Competency-based staff development (CBSD) involves the same concepts and strategies as performance-based teacher education (PBTE). Like PBTE, a CBSD program is structured on the basis of identified instructor competencies (i.e., the skills instructors need to be effective and successful in the profession). CBSD provides instructors with a systematic, long-term program through which to improve their present skills and acquire new ones.

Also like PBTE, instructors in a CBSD program are required to demonstrate essential competencies in an actual teaching situation, which ensures that the instructor has not only knowledge of teaching but also the ability to **perform** the teaching function well in the classroom and lab. This approach to staff development has particular significance for occupational instructors who enter teaching from business or industry, without previous training in the science and art of teaching.

A CBSD program also offers unique opportunities for the professional growth of instructors who have been prepared in conventional university-based teacher education programs that focus on acquiring knowledge of how to teach through requisite courses and credits. By focusing on acquiring and demonstrating specified competencies essential to successful teaching, conventionally prepared instructors may find the CBSD program invaluable in sharpening their teaching performance and applying their knowledge to greater effect.

There are probably as many variations on CBSD as there are institutions using this approach. Each institution tends to design its program in accordance with its unique educational setting, faculty characteristics and backgrounds, resources, and institutional goals. There are, however, two main types of CBSD programs in operation: professional improvement programs and credential programs.

Professional improvement programs. Most CBSD programs are established by schools and two-year colleges because they want faculty members to improve their performance as instructors. Improvement of instruction is a major goal in vocational-technical education today, and staff development programs are considered to be the most effective way of reaching this goal.

Generally, participation in such CBSD programs is voluntary. New instructors, instructors who are experiencing difficulties in the classroom, and experienced instructors who are particularly achievement-oriented are prime candidates for voluntary programs.

A much smaller, but growing, number of institutions have organized mandatory or continuing CBSD programs. In these, every faculty member (and in some cases, every staff member) is involved in staff development activities throughout his/her tenure. The philosophy is, there are always new skills to learn, new refinements to put into practice, new challenges to meet. Individual teacher education modules make such programs feasible in a way that traditional methods and materials simply cannot.

Credential programs. Many schools and colleges now provide instruction through their staff development programs that enables instructors to meet state or local certification standards and acquire their initial teaching certificate. Some programs are built on the career ladder concept and provide for advanced levels of certification. Rather than expect instructors to travel to a distant university for evening lecture courses, schools and colleges provide time, materials, and instruction so that instructors can pursue certification right on campus during the working day. The usual practice is to work cooperatively with a nearby university, which serves as a quality-control and credentialing agency.

What these two forms of staff development have in common is that they are organized and managed by the institution itself, solely for the benefit of its own faculty. The program can be designed to meet local needs, instruction can be provided at the time and place most convenient for faculty and staff, and faculty progress can be readily monitored and encouraged.

Selection of Competencies

As in university-based PBTE programs, the single most important phase of the CBSD program development process is the identification and selection of competencies. If this is not done thoroughly and carefully, the program will never reach its full potential for improving instruction. Because a CBSD program is structured entirely around competencies, the identification process merits considerable time and attention.

In order to gain the widest possible acceptance in the institution, the program competency list (or chart or profile) should not be the work of one person. Competencies can best be identified by a special committee or task force specially selected for the purpose. The committee should be knowledgeable about vocational-technical teacher training and CBSD. Because the task is demanding and requires open-mindedness and flexibility (even compromise), committee members should be articulate and able to work cooperatively with others. Members of the committee could include the staff development coordinator, vice president or director of curriculum and instruction, master teachers, and vocational-technical teacher educators.

There are at least three categories of competencies that should be considered in selecting the elements of a CBSD program: (1) competencies generally required for effective vocational-technical teaching, (2) competencies that relate to the roles and responsibilities of instructors in the specific institution, and (3) competencies required for teacher certification or a degree. There may be overlap among these three categories, but they should all be analyzed.

The general teaching competencies are related by research to teacher effectiveness. Some of these are essential behaviors for instructors at all levels and all subject matter areas (e.g., oral questioning, reinforcement, test construction). Other competencies are more important to one institutional level or group of instructors than another (e.g., assisting students in developing self-discipline tends to be more important at the secondary level). The titles of the National Center's modules provide a convenient and comprehensive list of effective teaching competencies, which can be reviewed for inclusion in the CBSD program.

Institution-specific competencies may be fewer in number, but they should not be ignored. These competencies express the special skills expected of instructors in that particular institution. For example, institution-specific competencies might include using the Hill Model for determining students' learning styles or preparing job descriptions. Because they are unique, they will probably not appear in standard lists of teaching competencies, nor will teacher education modules be available.

The third category of competencies—those related to certification and degree requirements—will not affect all CBSD programs. If the program has as one of its goals the preparation of instructors for certification or degrees, then care must be taken to ensure that the requisite competencies are identified and that materials and instruction are made available. This may not be quite as easy as it sounds, because certification and degree requirements may be stated as topics rather than as competencies. The topics will thus need to be translated into competency statements, and approval from credentialing agencies will need to be obtained.

Identification Methods

There are several practical approaches that can be used to identify CBSD program competencies. The most obvious source of information about competencies is contained in descriptions of existing CBSD programs, several of which are included in the appendix to this guide. The professional literature, conference presentations, and personal contacts will also provide valuable leads to successful CBSD programs and their competency lists or charts. The instructor competencies included in these lists can form a large pool from which an institutional list can be carefully selected.

Other sources of competency statements (though they may be called *performance indicators* or other terms) are the analyses of teacher effectiveness research completed in recent years. The Florida Performance Measurement System (FPMS) is one example, and similar analyses have been done in other states. These analyses are couched in terms of generic, rather than occupational, teaching skills, but the connection is obvious.

A large institution may wish to undertake a job analysis using its own faculty. Survey techniques can be used to ask teaching faculty (1) what tasks they perform in the course of their professional work, (2) what they think they should do, and (3) what additional skills they need. Teacher educators, supervisors, support personnel, and administrators can then be asked to verify and refine the resulting competency list. The Cotrell competency studies, on which the National Center's original module series (100 modules) was based, were job analyses done on a nationwide basis.

One of the most efficient and cost-effective approaches to competency identification for an institution's CBSD program is the DACUM (**D**eveloping **a** **Cu**rricul**um**) analysis. In the DACUM approach, a small committee of 8–12 members is selected, representing the institution's master teachers and supervisors. Through a two- to three-day modified brainstorming session carried out under the leadership of a trained DACUM coordinator, a profile chart of teacher competencies is produced.

The chart can include both the general and the institution-, degree-, or certification-specific teaching competencies needed by instructors, which provides a complete basis for designing a staff development program. A number of institutions have now produced their own DACUM charts of instructor competencies, reviewing and revising them at about three-year intervals.

Instructors entering the profession for the first time directly from business and industry need particular help from the CBSD program. Having had no previous teacher training, they must quickly acquire a few basic teaching skills, often called *survival skills,* that they can use to keep themselves afloat during their first weeks on the job. Many short lists of survival skills are available, and a typical survival skills list includes the following competencies:

- Develop a lesson plan
- Select student instructional materials
- Prepare teacher-made instructional materials
- Introduce a lesson
- Summarize a lesson
- Present an illustrated talk
- Demonstrate a concept or principle
- Demonstrate a manipulative skill
- Employ oral questioning techniques
- Employ reinforcement techniques
- Manage the vocational laboratory
- Direct student laboratory experience
- Assess student performance: knowledge
- Assess student performance: skills
- Determine student grades

However, each institution will no doubt want to develop its own list, taking into account its own instructional approach and setting, the unique responsibilities of its faculty, and the age range of its students.

Provision for Career Ladders

In recent years, there has been increased recognition that the profession must not only **prepare** instructors for the vocational-technical classroom and lab, it must also **retain** effective individuals so they do not leave education for other fields. The process of preparing and developing instructors is expensive and time-consuming; therefore, it needs to lead to long-term commitment to the profession on the part of those individuals.

One design for retaining effective instructors is to incorporate the career ladder concept into the CBSD program. An individual thus has opportunity to advance in clearly articulated steps **within** the role of instructor. State certification plans can be constructed on the career ladder framework, and/or individual institutions can establish career ladders for their own instructional staff.

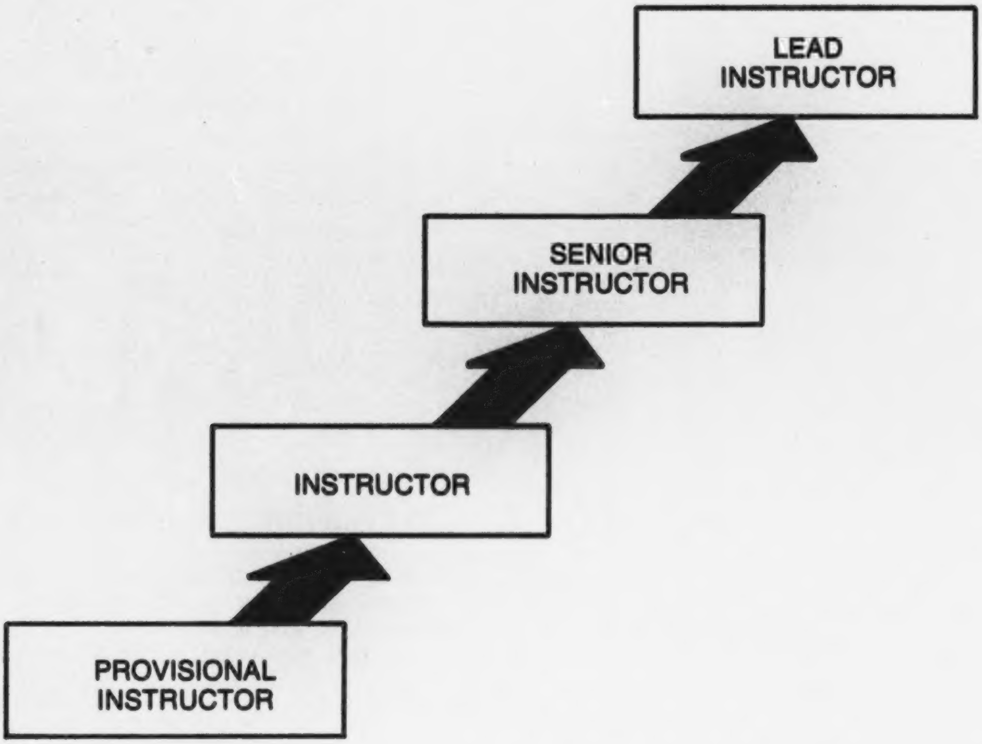
Two states have developed CBSD programs that provide a four-level career ladder for vocational-technical instructors (see sample 12). Attainment of each level is contingent upon proficiency in a specific number of additional teaching skills, successful teaching experience, and technical updating. Rewards for each level include higher professional status, greater job security, increased professional effectiveness, and salary increments. The career ladder concept is designed to retain effective instructors and to provide exit points for those who do not demonstrate the required effort and abilities.

In this career ladder model, all beginning vocational instructors are given the rank of **provisional instructor** and are required to participate in an intensive training program prior to beginning their teaching or within their first three months on the job. The competencies specified for this level are those the instructor needs in order to survive in the classroom during those first critical weeks and months.

Within two years, the individual must meet the requirements for the **instructor** rank. The competencies required for this level are basic teaching skills—ones that instructors are expected to perform frequently and competently. Additional technical updating is also required. This is a temporary level, from which instructors are expected to advance.

SAMPLE 12

CAREER LADDER MODEL



In order to achieve the next level in the CBSD program—**senior instructor**—the instructor must master a series of advanced teaching competencies, some of which may be selected on the basis of his/her professional responsibilities, personal interests, or career goals. Earned college credit in the field of education may also be required. Instructors who wish to remain at the senior instructor level may do so, but a regular program of renewal and evidence of increased competence in instruction are required.

The rank of **lead instructor** (or master instructor) is designed for those highly competent senior instructors who wish to assume responsibility for program leadership, curriculum development, and instructional improvement. In addition to mastering a selected list of competencies related to these responsibilities, the lead instructor must hold a bachelor's or master's degree. Again, technical updating experiences are required.

There can, of course, be innumerable variations in the career ladder model. The titles and terminology may be different, the requirements and time frames based on institution needs, and the selected program competencies unique to the institution. There are, however, a few principles that should be incorporated: (1) comparable effort should be required to move from one level to the next, (2) competencies to be achieved for each level should be carefully selected and stated in terms of instructor needs at that level, (3) regular technical updating should be built into the program, and (4) incentives for achieving each level should be included.

Participant Motivation

Without effective incentives and faculty motivation the CBSD program is likely to languish—a good idea that never reaches its potential. CBSD is really no different in this regard than more conventional professional improvement programs, so the issue of incentives will be dealt with only briefly here. In CBSD, however, the possible strategies for involving faculty are somewhat more clear.

Any staff development program constitutes an "add-on" for instructors; it demands additional time and effort beyond classroom instruction and program management. Thus, it may be resisted (slightly by some, very strongly by others), though the resistance may take the form of inertia rather than active opposition. To counteract this, a variety of incentives should be incorporated into the program. Participants will react individually; what serves as a motivation for one person will not necessarily motivate another.

A number of institutions with CBSD programs have required participation as a condition of employment. Prospective instructors have the program described to them, are shown the list or chart of competencies to be achieved, and are told how the program can help them become better instructors. The ties to certification (either state or institutional) are also explained.

It is rare indeed for a desirable prospect to turn down an instructional position because of the CBSD program requirements. On the contrary, properly presented, this kind of staff development is usually seen as a benefit to the newly hired instructor. Many instructors view the CBSD program as a means to move upward in the profession. Other instructors are impressed with the direct link between the competencies identified in the CBSD program and increased instructional performance, which leads, in turn, to greater student progress and success.

Other incentives, both intrinsic and extrinsic, should be built into the CBSD program design and added as circumstances permit. The most effective incentives include the following:

- Released time or scheduled time during which faculty can work on the achievement of competencies (some institutions have been able to work out schedules that provide instructors with one day a week devoted to staff development and program development, without other responsibilities; others have a designated daily staff development period)
- Tuition reimbursement at a state university, leading to a degree or certification
- Degree credits for competencies achieved in the staff development program
- Professional recognition (e.g., in-house recognition, request for a journal article or conference presentation, designation as a master instructor)
- Professional development points, leading to salary increments
- Consideration of competency attainment in awarding tenure or a permanent contract

University/Institution Collaboration

Most schools and two-year colleges will probably decide to establish an independent staff development program—one that is designed for the institution's purposes and controlled by school or college personnel. There are many advantages, however, in having some form of association or collaboration with a nearby university teacher education program:

- Teacher educators can assist in the design of the program to ensure that it is not only valuable for professional improvement but meets state certification and university degree requirements as well.
- Teacher educators can help maintain program quality control and certify that the activities meet the standards for credit or certification.
- Teacher education faculty can serve as a source of special expertise, through individual or group instruction, as instructors work to acquire specific program competencies.
- University credit toward a degree can be made available for completing specified competencies.

Sample 13 shows (1) the relationships possible between a university program and a CBSD program and (2) the main features of a collaborative program, which can be described as follows:

- Institutional goals are identified through some form of analysis. Instructors' needs and goals are also identified, through individual needs assessments.
- An instructor's individual staff development plan is prepared from a selection of competencies identified based on institutional needs and certification and degree requirements. University teacher educators assist in the identification of requirements.
- Staff training may take many forms, including use of instructional modules, participation in small- and large-group learning activities, and consultation with resource persons. Teacher educators contribute to staff training, providing one-on-one instruction, offering courses, serving as resource persons, and so forth.
- Teacher educators collaborate with the institution's resource persons in the evaluation of instructor performance, either by conducting the evaluation themselves or by training and supervising school resource persons in evaluation.
- Each instructor completes a cycle of training and evaluation on one competency and then proceeds to the next competency in his/her individual plan until all competencies in the plan are achieved and all requirements met.
- During the training and evaluation cycles, the teacher educators provide an element of quality control and can therefore certify that each instructor's work and performance meet accepted standards for state certification, a university degree, or professional improvement points.

Program Management

For most institutions, the administration of the CBSD program will be fairly simple. One person will be designated as staff development director (or a similar title), and the various management functions will be carried out only by that person. Of course, clear procedures also need to be developed so that the program functions efficiently, with the greatest results and the fewest frustrations for its participants.

The main purposes of a CBSD program are to increase instructors' teaching skills and help them meet their professional responsibilities. Too many forms, procedures, and rules can get in the way of the purpose and destroy the beauty of the approach. To the extent possible, staff development should be a personal cooperative effort, characterized by challenge and satisfaction. A few good management practices will help speed the process.

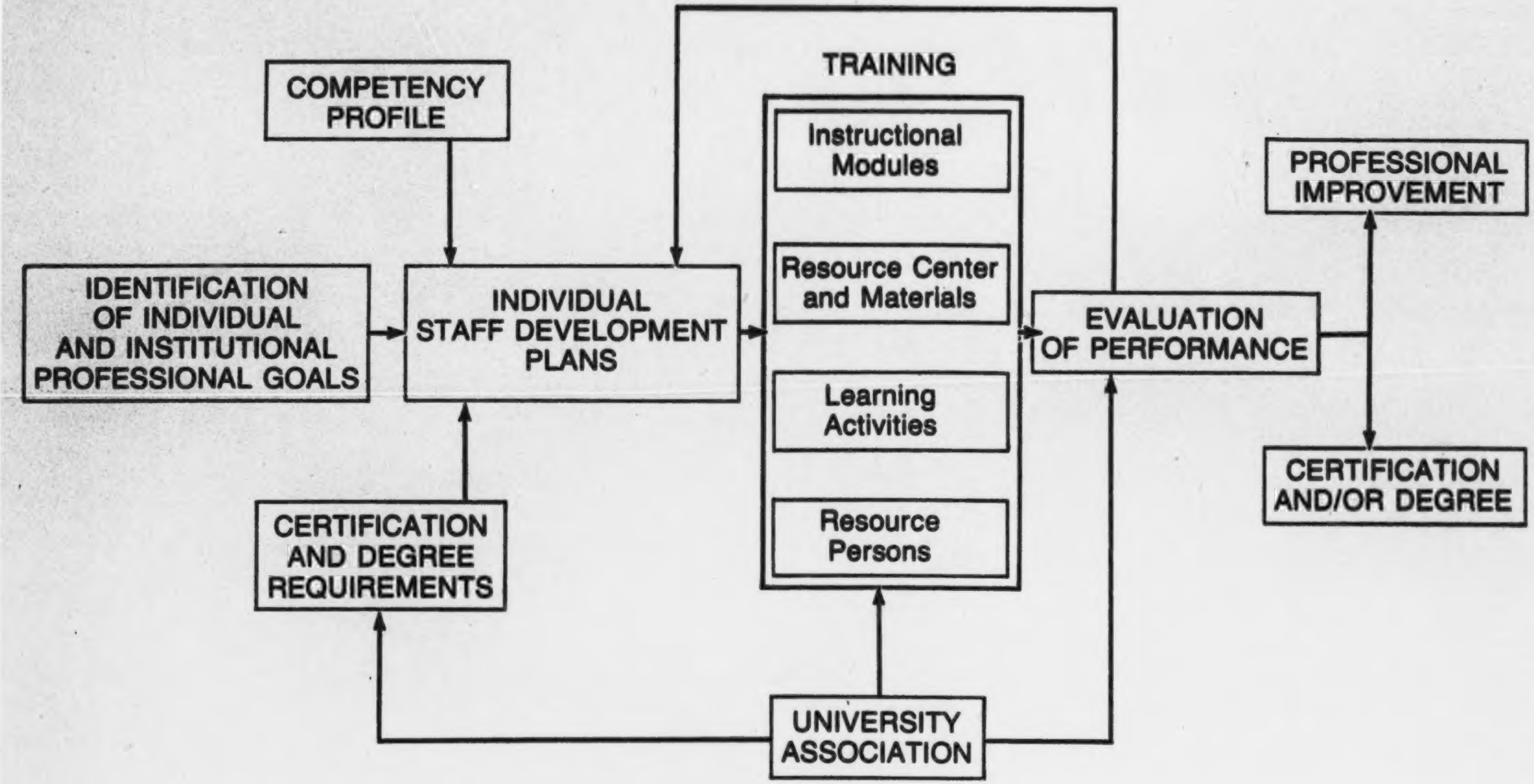
The areas of program management that need careful planning and design include staffing, scheduling, and record keeping. Policymaking is another important concern, which is often carried out with the help of a steering committee. The use of learning plans and the design of the facilities are two other areas that must be addressed as part of the management function.

Staffing

The person in charge of staff development may be a **full-time** director or coordinator or someone with another job title who has **part-time** responsibility for staff development. In larger programs there may need to be additional staff (e.g., an assistant staff development trainer and a clerical worker). Smaller programs may need to combine the responsibilities for staff development and curriculum development.

SAMPLE 13

COLLABORATIVE PBTE/CBSD MODEL


COMPETENCY PROFILE
TRAINING
Instructional Modules
Resource Center and Materials
Learning Activities
Resource Persons
PROFESSIONAL IMPROVEMENT
IDENTIFICATION OF INDIVIDUAL AND INSTITUTIONAL PROFESSIONAL GOALS
INDIVIDUAL STAFF DEVELOPMENT PLANS
EVALUATION OF PERFORMANCE
CERTIFICATION AND/OR DEGREE
CERTIFICATION AND DEGREE REQUIREMENTS
UNIVERSITY ASSOCIATION

There are several options for appointing a part-time director, but these options involve some potential disadvantages. A **university-based** director may be appointed and may be highly qualified and experienced in staff development. However, such a person is geographically separate from the program and frequently has other responsibilities that limit his/her availability. Nevertheless, by scheduling regular days and hours at the school or college, the difficulties of this form of management can be minimized.

An **administrator** may also serve as director, though this may involve providing staff development leadership in addition to what is probably already a full schedule of activities. Consequently, there is a real possibility that when the administrator's schedule gets tight, staff development may not get the attention it deserves. An **instructor** (or perhaps two instructors) may be given released time to serve as director. This is, again, a split assignment, which can be a disadvantage. Enthusiasm and commitment may make up for the lack of full-time responsibility, however.

Director. The specific qualifications for the staff development director will be determined by the nature of the institution and the designated duties of this position. Several qualifications, however, are generally considered to be essential to the director's success:

- **Teaching skills**—The staff development director should have had several years of successful teaching experience. Ideally, the director should be recognized as a master teacher who can serve as a role model for other instructors in the institution.
- **Human relations skills**—The director must have the ability to relate to vocational-technical instructors from many different occupational areas and with a range of professional and personal capabilities. He or she should have excellent communication skills, group-process skills, and leadership skills.
- **Commitment**—The director should be thoroughly committed to the concept of competency-based staff development and should have a record of having pursued his or her own program of professional growth.
- **Change process skills**—The director must be able to deal with change and to assist others through the change process. This includes providing support and activities appropriate for the stages at which faculty are in the change process.
- **Adult education skills**—Vocational-technical personnel are adults of varying ages, abilities, and years of experience. The director must be able to apply adult learning principles and model appropriate training methods.

The staff development director should have a position of recognized authority, with power to make management decisions, see that established procedures are followed, and ensure that participants are actively and properly meeting their professional improvement responsibilities. The program will undoubtedly suffer if the appointed director has little or no authority except as a record keeper.

Resource persons. *Regular resource persons*, with broad responsibilities for instructing and evaluating faculty and facilitating their work through the modules, should be readily available. The institution's staff development coordinators, master teachers, and instructional support persons and university teacher educators may function as primary resource persons. In a small program, the staff development director could be the sole resource person, assuming all the necessary functions. Larger programs will certainly benefit from having several primary resource persons, representing a range of areas of professional expertise, so instructors may have access to the best assistance to meet their needs.

In addition to regular resource persons, there should be a cadre of *special resource persons* available to work with faculty on particular modules. Almost anyone in the school or college with a highly developed skill could serve as a special resource person. A media specialist could work with staff on the series of modules concerned with providing instruction through audiovisuals. A skilled graphics instructor could serve as resource person on modules dealing with displays and brochures. The institution's lead secretary could help faculty with organizing and maintaining a filing system. The vice president for business affairs is a natural for helping faculty with the modules on budgets. Experience has shown that serving as a special resource person should be voluntary; however, most staff enjoy the recognition this affords and are glad to be involved.

Outside consultants can also serve as resource persons, delivering instruction and assistance on specific skills, if there are funds in the budget to pay for them. A small group of faculty working to develop the skills needed to establish a competency-based education (CBE) program would greatly benefit from the help of an expert in CBE, for example. Consultants can be hired to work with individual instructors, hold small-group meetings, conduct mini-courses, or deliver university course work.

An alternative to the use of outside consultants is to pay qualified school or college personnel to provide special instruction. There are pros and cons; local staff may have clearer insights into the skills needed by the particular institution, but a fresh and objective view by an outsider may be more effective.

All resource persons must have a clear understanding of the CBSD process and agree with its fundamental principles if they are to function effectively. They will also need a thorough knowledge of the modules with which they will be dealing. Certain professional and interpersonal skills will greatly enhance their work in the resource person's role (e.g., skill in conferring with instructors, conducting classroom observations and performance assessments, guiding group discussions, and planning learning activities).

If prospective resource persons are not familiar with CBSD or expert in the needed skills, some type of formal training will be needed. Most certainly, potential resource persons should not simpley be handed a supply of modules and exhorted to help people in any way they can. A staff development director who is experienced in CBSD and thoroughly familiar with the National Center's modules can provide the training, perhaps with the assistance of specialists in counseling or assessment. Or, training by outside experts may be the best strategy. For example, the National Center could be asked to provide the necessary resource person training, usually in the form of a two- or three-day workshop, offered on a cost-recovery basis. Experienced staff developers from schools or colleges with successful CBSD programs may also be contacted to serve as trainers.

Some resource persons will readily accept the responsibilities of being a resource person—because it is an integral function of their jobs. Others will need special motivation or compensation of some kind. Being a designated resource person should be promoted in the institution as an honor and a privilege. The names of resource persons can be publicized and their work publicly commended. One community college conducts its annual resource person training sessions in the informal atmosphere of a weekend retreat at an attractive resort; training and motivation are thus one and are much sought after. Other institutions are able to pay the resource person a small stipend for each faculty member with whom he/she works; the amount of money is not large, but the recognition is important to those involved.

Scheduling

In individualized CBSD programs, instructors work on their own much of the time; however, they also need regular access to a resource person and to group activities. This requires planning and scheduling. Instructors with full teaching loads and part-time instructors with outside responsibilities each have unique time constraints that must be accommodated if their professional development needs are to be met.

Resource persons should be readily available to the instructors when they need information and help, when the going gets tough, when evaluation is required, or when simple reassurance is needed. A schedule showing when various resource persons are available should be distributed to all participants, as well as being posted in the staff development office. The schedule should provide opportunity for all instructors—both full- and part-time—to meet with resource persons. This may require early morning, late afternoon, or evening hours, as well as regular school hours. Arranging for faculty to work with special resource persons on specified modules may be a separate scheduling task, and care must be taken to ensure that resource person duties in this case do not interfere with regular duties.

Schedules will also be needed when small- and large-group activities are organized. Instructor participation in such activities is critical to the success of personalized staff development programs for at least three reasons: (1) teaching is an interactive process; thus, experience in interaction is essential to becoming an effective instructor; (2) some learning activities are most effective when learners work together, sharing ideas, information, and reactions; and (3) instructors generally find that working on competencies solely in isolation can be dispiriting. It is important, then, to schedule activities that offer instructors an opportunity to meet, interact, practice skills together, and share problems and solutions.

A staff development director who also serves as a resource person will need to have good time-management skills. Time must be allocated for administrative and management tasks, as well as for working with individual instructors. Although it is highly desirable that the resource person be accessible at all times, a staff development director cannot operate efficiently if constantly interrupted from his/her management duties. Scheduling regular hours and appointment times for resource person duties will tend to keep things under control.

Record Keeping

When the time comes to design a record-keeping system for instructor progress in the CBSD program, there are several highly desirable characteristics that should be kept in mind. (These are the same characteristics as those described for a PBTE program in the previous chapter.)

- The system should store a record of each instructor's entire proposed program.
- The system must provide an accurate record of the professional teaching competencies the instructor has mastered.
- The system should correlate competencies completed and credits awarded.
- The system should record dates of competency attainment to serve as progress checks.
- Instructors should have access to their own records to determine their status.
- Resource persons need easy access to records in order to advise instructors, plan their own work schedules, and analyze program results.
- Official records must be tamper-proof.
- It should be possible for resource persons to record entries quickly and conveniently, at any time during the program.

Many of the record-keeping devices developed by the National Center to support its PBTE materials can be used in CBSD programs. One key instrument is the Teacher Performance Assessment Form (TPAF), the checklist found at the end of each module. When the TPAF is used to evaluate an instructor's proficiency in a given competency, a copy of the completed form can be placed in the instructor's staff development file to document his/her performance.

The Vocational Teacher Competency Profile (see sample 4, p. 30) is a simple yet effective device for monitoring instructor progress through the program. If the institution has produced its own instructor competency chart, that document will serve the same purpose. The profile or chart can be used for several functions:

- Instructors can identify the skills they wish to achieve or improve.
- The chart becomes the basis for writing individual plans.
- A record of the instructor's performance evaluations for each competency and dates of achievement can be kept on the chart.
- Progress through the program is easily monitored. Completed competencies can be color coded, for example, to make progress graphically clear.

Learning Plans

An instructor may proceed through the staff development program in an informal, self-directed manner, or participation may be more structured. An example of the latter scheme is given here:

1. On entry into the CBSD program (usually soon after being hired), the instructor reviews the teaching skills profile chart and identifies those skills that he/she can already perform satisfactorily. This gives a tentative entry rating, which allows the staff development specialist (e.g., the director or resource person) to determine where that instructor should start in the program.
2. The instructor and staff development specialist cooperatively prepare a short-term learning plan that identifies the objectives and skills to be achieved and the proposed target dates for achievement. (A sample learning plan form is shown in sample 14.) The first competencies attempted should be fairly simple, to assure success; later ones may be more difficult. The instructor's department chairperson may review the completed plan.
3. A copy of the plan is kept in a notebook in the staff development office. The instructor's resource person monitors progress.
4. Instructors receive individual performance ratings for each competency and are expected to maintain or increase their proficiency in each completed competency over time.
5. When one learning plan is completed, a new one is prepared. This continues until the instructor has satisfactorily demonstrated all the competencies on the profile.

SAMPLE 14

LEARNING PLAN

No. ____ Instructor ____________________ Program ____________________

LEARNING GOAL (OBJECTIVE) ____________________

SKILLS TO BE DEVELOPED ____________________

Proposed Start Date ____________________

Proposed Completion Date ____________________ Date Rated ____________________

Signed by ____________________ ____________________

Instructor Resource Person

Source: Holland College, Charlottetown, Prince Edward Island, Canada

Facilities

As the CBSD program is being organized, it will soon become apparent that an area should be set aside for staff development purposes. The facilities need not be elaborate, but they should be as convenient and attractive as possible in order to encourage faculty use. The staff development area should be set aside for exclusive use by instructors, giving them a place within the school or college where they can go to study, work, discuss, and seek information and advice. Space should be allocated as follows:

- **A resource room**—Such a room should contain easily accessible copies of modules for each skill specified in the program, along with any supplementary required or optional resource materials. A simple solution is to provide shelves with pamphlet file boxes in which are placed all materials for each skill.
- **A media area**—The media area should contain a variety of audiovisual equipment and materials (e.g., films, slide/tape presentations, videotapes, and audiotapes).
- **A quiet study area**—This area should contain study tables or carrels and should be carpeted, well lighted, and well ventilated.
- **A small-group room**—In order to facilitate small-group discussion and activities, this room should contain a seminar table. A special feature could be the installation of teleconferencing equipment so faculty groups could confer with resource persons and experts off campus.
- **An office**—The director of staff development needs an office appropriate for management duties, as well as for private conferences with instructors seeking assistance.

Such facilities need not involve great expense. Classrooms or offices can be converted for study and work areas. Resources can be housed in a corner of the school library if that is convenient. What is most important is that the space be readily usable by faculty and staff at all times.

Steering Committee

The staff development director is responsible for managing the day-to-day operation of the CBSD program; however, using a steering committee to oversee the entire program can prove very valuable. The steering committee can have various functions; for example, deciding on program policies, examining problems and recommending solutions, monitoring the program's operation, and serving as a communication link with faculty and administrative staff. Whatever its specific functions, the steering committee should be a genuine working group, not simply a general advisory committee.

A relatively small steering committee (e.g., five, or at most seven, persons) can function most efficiently. Members of the committee should represent the faculty, support staff, and administration. If the staff development program is tied closely to a university teacher education program, a vocational-technical teacher educator might serve as a regular or ex officio member of the committee. The staff development director can serve as chairperson for the group, setting up the agendas, conducting the meetings, and ensuring that decisions are carried out. The steering committee should meet at a regular time—for example, weekly as the program is being organized and established, biweekly when the operation is fully functioning and more routine.

Out of the deliberations and decisions of the steering committee should evolve a set of staff development policies and procedures. These should be organized into a staff development handbook that will help give consistency and continuity to the program. Agreed-upon policies and procedures should be carefully worded and set down on paper, given final approval by the committee, and inserted in organized form in the handbook (usually in looseleaf binder form to facilitate modification and improvement). The committee may also wish to produce an attractive brochure for distribution to the faculty and staff, which outlines the main features of the staff development program and provides basic information about its operation.

APPENDIX

PBTE/CBSD PROGRAM DESCRIPTIONS

The program descriptions in this section have been drawn from materials shared with us by the program developers; their willingness to share is much appreciated.

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The University of Central Florida (UCF) in Orlando is one of nine universities in the state system of higher education. It is mandated to serve the needs of the entire central region of the state, which includes rapidly expanding urban areas, as well as several sparsely populated rural counties. The present vocational teacher education program comprises the trade and industrial and health occupations areas. Some 85 percent of those in the program are teachers on the job, recruited for the teaching profession directly from business, industry, and service occupations. They seek initial certification, as well as undergraduate and graduate degrees. Because of the considerable geographic area to be covered, instruction is delivered in four outlying centers.

Program Model

The UCF model for vocational teacher education is designed around groups of research-identified teaching competencies, selected and sequenced to foster the teacher's professional growth. University professional education courses are called *Competency Clusters,* and each includes a number of related competencies to be achieved. The cluster Essential Teaching Skills, designed to help teachers survive in the profession, must be completed first, but the other clusters may be completed in any order, depending on the individual teacher's needs. In the undergraduate program, there are eight clusters, which include a total of 48 required and 11 elective competencies:

- Essential Teaching Skills in Vocational Education
- Methods of Teaching Vocational Education Subjects
- Evaluation of Vocational Instruction
- Management of the Vocational Classroom and Laboratory
- Special Needs of Vocational Students
- Professional Role of the Vocational Teacher
- Principles and Practices of Vocational Education
- Advanced Teaching Techniques for Vocational Education

The program involves two partially concurrent stages: (1) the teacher achieves proficiency in all program competencies through the cognitive and practice levels, working within a university seminar setting; and (2) the teacher demonstrates final competence in selected competencies while working in an actual teaching situation. Criterion-based grades of *A, B,* or *C* are awarded to designate acceptable levels of teacher achievement, but lower levels of performance are not recorded, nor is credit given. Teachers may progress through a cluster at their own best rate and may "test out" on a competency by demonstrating the skill and meeting the final assessment criteria.

In the Advanced Certificate and Graduate Program, all clusters are of variable credit, with the teacher building an entirely personalized program of specific competencies.

Instruction

There are three basic elements in the instructional program: the PBTE instructional modules, seminar sessions devoted to each module, and individualized instruction and counseling. Mainstays of instruction are the National Center's PBTE modules, though some additional modules unique to Florida's needs have been developed by UCF project staff. The modules are used just as designed, with readings, teacher feedback, simulations, practice, and final performance. The UCF program does not include typical quizzes, term papers, book reports, or final examinations.

The weekly cluster seminar is vital to the achievement of the teacher and the success of the program. Scheduled in advance, each seminar focuses on one specific module and the competencies it covers. Attendance is expected. In the seminar, the teacher educator/resource person may provide enrichment or situation-specific information, clarify ideas, answer questions, bring in additional resources, and/or observe and assess practice performances.

Teleconferencing is also a feature of the program, and it is used for two purposes: (1) to allow teachers who live in distant or isolated areas to enroll in the program, participate in the seminar sessions, and yet work independently at their home bases; and (2) to bring in by telephone special resource persons to enrich instruction.

Individual conferences are held as needed to help teachers overcome specific obstacles to competency achievement.

Assessment

Teacher assessment takes place in two phases: in the seminar and in an actual teaching situation. As teachers work to achieve a competency within the seminar setting, they present a specified performance (e.g., demonstrate a manipulative skill to a group of peers) or produce a specified product (e.g., develop a safety handbook for an occupational area) appropriate to the competency. The results are assessed by the resource person using checklist criteria known to the teacher. The product or performance must meet the *Good* or *Excellent* level on each criterion; otherwise, the teacher must recycle until that level is achieved.

Later, at a time arranged by the teacher, the teacher demonstrates the competency in an actual teaching situation, usually involving his/her own students and class setting. Assessment of the performance is usually done by school personnel (e.g., dean of instruction, area supervisor, or instructional specialist) serving as field resource persons, with training and supervision provided by the university.

Based on an earlier model—Program VITAL (Vocational Intern Teaching—Applied Learning) at Temple University (Philadelphia)—the F/PBTE program now available statewide in Pennsylvania is a completely field-based, performance-based program designed for vocational teachers entering the profession directly from business and industry. It is possible for an individual teacher to complete the initial program, and thus be eligible for provisional certification, in one year.

The F/PBTE program is fundamentally an individualized learning system that utilizes a variety of methods including (1) directed, individualized instruction; (2) instructional modules; (3) differentiated staffing; (4) team teaching; (5) helpful supervision; (6) self-evaluation; (7) video feedback; (8) criterion-referenced evaluation; and (9) assessment in an actual teaching situation.

Instructors-in-training are known as *interns* and are considered to be part of the staff since they are ultimately responsible for their own learning. Other levels of staff are as follows: A *resident resource person* (master teacher) and a *field resource person* (university staff member) work with the interns at their schools on a regular basis. A *senior teacher educator* coordinates the field-based teacher education program. A *Council of Educators*—consisting of an appointed representative of local administrators, a teacher educator, and an elected local teacher—reviews the work of each intern and makes the final decision about recommendation for certification.

Field resource persons are graduate students in the college of education. They are given special training for their roles through a series of 13 modules developed at Temple University and available to the profession. The training involves the development of counseling skills and attending behavior. Weekly staff meetings held on the university campus deal with current individual problems and provide additional training for field resource persons.

The initial instructional program is based on 30 carefully selected PBTE modules (see p. 70) and operates as follows:

1. The field resource person and intern determine the intern's needs and select modules accordingly from the program list.
2. The intern completes the first module in part or in total, again according to personal needs.
3. When the intern believes that the stated criteria for performance can be met, he/she attempts the final learning experience and evaluates his/her own performance.
4. When self-evaluation indicates successful performance, evidence of this is presented to a resource person.
5. The intern and resource person confer to determine whether the evidence (usually a videotape of the presentation or a written product) meets the required standards.
6. When all competencies have been achieved, evidence of the intern's overall teaching competence is presented to the Council of Educators for a decision regarding readiness for provisional certification.

The F/PBTE system encompasses programs for professional development beyond provisional certification as well. By successfully completing 18–30 additional PBTE modules, teacher interns can earn the professional credits necessary for permanent teacher certification. Credit hours toward a bachelor's degree may also be earned through completion of modules. Another offering is the CAPS (Classroom Application of Pedagogical Skills) Program, which is an inservice, permanent certification program for teachers of home economics. Interns must earn 24 credits beyond the B.S. degree. A pool of approximately 90 modules is used in the CAP Program.

A computerized management information system has been developed to assist the F/PBTE program coordinator and field resource persons in managing the data needed in carrying out their program responsibilities. Stored in memory is an up-to-date description of the personal and demographic characteristics of all interns and the staff members serving them, as well as a complete history of staff and intern activity since becoming active in the program. This information is provided to staff members through reports issued at specific intervals. These reports guide much of the staff's activity in serving the interns. Module inventory and control is totally computerized as well.

Modules in F/PBTE Program: Initial Level

B-1 Determine Needs and Interests of Students
B-2 Develop Student Performance Objectives
B-3 Develop a Unit of Instruction
B-4 Develop a Lesson Plan
B-5 Select Student Instructional Materials
B-6 Prepare Teacher-Made Instructional Materials
C-2 Conduct Group Discussions, Panel Discussions, and Symposiums
C-4 Direct Students in Instructing Other Students
C-6 Guide Student Study
C-7 Direct Student Laboratory Experience
C-8 Direct Students in Applying Problem-Solving Techniques
C-9 Employ the Project Method
C-10 Introduce a Lesson
C-11 Summarize a Lesson
C-12 Employ Oral Questioning Techniques
C-13 Employ Reinforcement Techniques
C-15 Present an Illustrated Talk
C-16 Demonstrate a Manipulative Skill
C-17 Demonstrate a Concept or Principle
C-21 Prepare Bulletin Boards and Exhibits
C-22 Present Information with Models, Real Objects, and Flannel Boards
C-23 Present Information with Overhead and Opaque Materials
C-29 Present Information with the Chalkboard and Flip Chart
D-1 Establish Student Performance Criteria
D-5 Determine Student Grades
E-5 Provide for Student Safety
E-8 Organize the Vocational Laboratory
E-9 Manage the Vocational Laboratory
G-7 Conduct an Open House
I -3 Develop an Active Personal Philosophy of Education

Holland College
STAFF DEVELOPMENT PROGRAM

Holland College (Prince Edward Island, Canada) has a strong staff development program that involves **all** staff members (administrative, instructional, and support) throughout their terms of employment at the college. The principles and procedures of the program are consistent with those of the regular competency-based vocational training programs of the institution. Thus, new instructors use the same approach to learn teaching skills as their students use to learn occupational skills.

Just as in all the training programs at Holland College, the competencies for the instructor development program have been identified through the use of a DACUM analysis—in this case, analysis of the competencies needed by the faculty of the college. The analysis is in the form of a Learning Management profile chart, which in its latest form lists 251 competencies. The chart is reviewed and revised every three years. The competencies are to a great extent parallel with those on which the National Center's PBTE modules are based.

The college certificates its own instructors. New instructors have three years to achieve the Learning Management competencies at a minimal level; if they do not, their contracts are not renewed. Some new instructors have acquired a number of instructional skills through previous training, employment, or life experience. A new instructor first goes over the entire chart and rates his/her level of proficiency in each competency using the college's standard staff development rating scale:

0 Has some knowledge and limited experience, but not sufficient for participation in a work environment.

1 Can perform some parts of the skill satisfactorily, but requires instruction and supervision to perform the entire skill.

2 Can perform this skill satisfactorily, but requires **periodic** supervision and/or assistance.

3 Can perform this skill satisfactorily **without** assistance and/or supervision.

4 A Can perform this skill **without** supervision or assistance *with proficiency in speed and quality.*

B Can perform this skill **without** supervision or assistance *with initiative and adaptability to special problem situations.*

C Can perform this skill **without** supervision or assistance *and can lead others in performing it.*

The department head is responsible for the continued professional progress of instructors in his/her department and serves as one of the resource persons available to the instructors. The staff development director assists instructors in selecting a program of competencies, locating instructional materials, forming work groups, and so forth.

As a new instructor begins the staff development process, he/she makes out a learning plan. This form contains space for listing several competencies and estimated completion times, and it is signed by the instructor and a staff development person, forming a kind of contract. Instructors usually work on several related competencies at the same time, rather than on single competencies in succession.

The first competencies selected are heavily slanted to the needs of the instructor as he or she perceives those needs (even if staff development personnel perceive otherwise). In this way, the instructor is more likely to have early success and more likely to think of the program as self-directed. At Holland College, among the first competencies needed are those dealing with orienting students to the college's individualized learning system: the Self-Training and Evaluation Process (S.T.E.P.).

As the instructor gains self-confidence, staff tend to exert more influence on the instructor's selection of competencies, basing decisions on observations of the instructor's performance and the progess of his/her students. The selection process is basically informal—conferences and counseling—rather than data-based; feedback forms, computer data, and the like, are not used.

The instructor's progress is monitored by the staff development office. If the contracted date for completing a learning plan is missed, the staff development director confers with the instructor to identify the problem and formulate a solution. If completion dates are consistently missed or progress is slow, the department head is brought into the situation to recommend a course of action. As each learning plan is completed, a new one is designed. When all competencies have been at least minimally achieved, the instructor then plans a program for achieving the competencies at higher performance levels, ad infinitum.

Assessment of the instructor's competence is done by a resource person, using the standard rating scale previously described. The resource person may be a staff development person, a department head, or another instructor. There is no failure; the instructor earns a rating that represents the level he/she has achieved, and this rating can be raised at a later time. Over time, ratings may, however, go down as well as up.

The instructional materials for staff development are handled as in all other instructional programs at the college. There is a file box for each competency, and there is a Holland College module for each competency in the box. The National Center's modules, videotapes, slide/tapes, articles, and so forth, are used as supplementary resource materials. There is also a small professional library in the resource center for staff development. The resource center is an attractive place, with desks, tables for discussions, reading chairs, and media hardware.

Spokane Community College
STAFF DEVELOPMENT PROGRAM

Participation in the staff development program at Spokane (Washington) Community College is basically voluntary, but over a period of time, the program has generated a high degree of interest and involvement. There are three major sources of motivation for instructors to become involved in the program: (1) state certification, (2) professional improvement units, and (3) personal desire to improve instruction.

Community college instructors in the state of Washington have a maximum of two years to complete their certification requirements. They can meet these requirements very conveniently by successfully completing a prescribed series of teacher education modules right at their own institutions. There are 21 modules to be completed, of which 12 are required (see p. 74), and 9 are elected from a list of 25.

Experienced instructors participate in the program to earn professional improvement units, with successful completion of seven teacher education modules equalling three units. Accrued units lead to merit pay increments. The modules to be completed are selected by the instructor. Not surprisingly, the first modules selected often involve competencies considered quickly and easily achieved; however, instructors are soon working on more difficult and complex teaching skills.

A significant number of instructors see the staff development program as a way to solve their own teaching problems or to become more effective as teachers. Regular evaluation of all instructors at the college by students, faculty peers, and supervisors aids in the identification of areas for improvement.

Each interested instructor meets with staff development personnel, and they cooperatively select a module or series of modules that will meet the instructor's needs. Instructors may also choose modules that particularly rouse their interest—perhaps a teaching technique that they have long wanted to try or one that might increase student interest in the training program. Flexibility in the choice of modules has been found to be very important to instructors.

All new instructors go through a cognitive mapping process to help identify their preferred and most effective learning styles. The Hill Model is used, primarily because it is both feasible and practical. Instructors are given the necessary booklet to complete at home, a task that takes about 45 minutes. The responses are computer-scored and analyzed, with the results available to the instructor and resource persons.

Instructors also value the fact that they have a free choice in selecting the resource persons with whom they will work. There may be as many as 40 or 50 trained resource persons among the instructors, support staff, and administration of the college. Resource person training takes place during a three-day weekend retreat, and the training process itself is considered valuable; trained resource persons are themselves doing a better job of instruction.

Resource persons are paid a small stipend for each instructor with whom they work. They fit their duties into their existing schedule and work load. Resource persons function exactly as they are intended to function in a PBTE/CBSD program, serving as advisors, facilitators, and evaluators. The real reward for them is the professional challenge and satisfaction this role affords; they want to help others.

Required Staff Development Modules

A-4	Organize an Occupational Advisory Committee
A-7	Conduct an Occupational Analysis
B-2	Develop Student Performance Objectives
B-3	Develop a Unit of Instruction
B-4	Develop a Lesson Plan
B-5	Select Student Instructional Materials
B-6	Prepare Teacher-Made Instructional Materials
C-10	Introduce a Lesson
C-11	Summarize a Lesson
C-12	Employ Oral Questioning Techniques
C-16	Demonstrate a Manipulative Skill
D-4	Assess Student Performance: Skills

At the Albuquerque (New Mexico) Technical-Vocational Institute (T-VI), all the CBSD concepts and materials are integrated into a comprehensive Professional Development Plan ((PDP). New instructors who have not completed a preservice teacher education program are required to become proficient in a specified series of teaching competencies. Since there are no certification requirements for faculty at T-VI, this program of training provides the learning experiences needed for an instructor to function successfully in the classroom and laboratory.

A program of 41 modules (see p. 76) must be completed during the first two years of employment; this forms the basic instructional skills phase of the PDP. The delivery system is a combination of formal course work and individual or group work. The courses are held at T-VI and are taught jointly by teacher educators from the University of New Mexico (UNM) and T-VI staff.

T-VI maintains a contract for professional services with UNM, which provides for a teacher educator to be on the T-VI campus one day a week to assist with the PDP. Resource person training is also conducted in cooperation with university teacher educators. The PDP is administered through regular T-VI administrative procedures.

Resource persons are master teachers who volunteer to serve in this role. They receive PDP credit for their activities. Instructors have a choice in selecting the resource persons with whom they will work. All the skills learned in the program are used in regular T-VI classes, with the instructor's performance being assessed by a resource person observing the actual teaching situation.

The resource center is an integral part of the professional development program. It is the center for individual study and group discussion. Housed in the resource center are all the necessary instructional materials, both purchased and internally developed. File boxes are organized according to teaching competencies, and each contains the teacher education module, media materials, and print materials related to a given competency.

Of particular interest are the slide/tape presentations on teaching skills that have been developed by T-VI instructors. When instructors are learning about a particular teaching skill (e.g., presenting information with films), they also learn the related T-VI policies and procedures (e.g., how to order films and schedule audiovisual equipment). This enables instructors who are learning a competency to apply it directly to their teaching role at Albuquerque T-VI.

PDP Modules: Basic Instructional Skills Phase

B-1	Determine Needs and Interests of Students
B-3	Develop a Unit of Instruction
B-4	Develop a Lesson Plan
B-5	Select Student Instructional Materials
B-6	Prepare Teacher-Made Instructional Materials
C-1	Direct Field Trips
C-2	Conduct Group Discussions, Panel Discussions, and Symposiums
C-3	Employ Brainstorming, Buzz Group, and Question Box Techniques
C-4	Direct Students in Instructing Other Students
C-5	Employ Simulation Techniques
C-6	Guide Student Study
C-7	Direct Student Laboratory Experience
C-8	Direct Students in Applying Problem-Solving Techniques
C-9	Employ the Project Method
C-10	Introduce a Lesson
C-11	Summarize a Lesson
C-12	Employ Oral Questioning Techniques
C-13	Employ Reinforcement Techniques
C-14	Provide Instruction for Slower and More Capable Learners
C-15	Present an Illustrated Talk
C-16	Demonstrate a Manipulative Skill
C-17	Demonstrate a Concept or Principle
C-23	Present Information with Overhead and Opaque Materials
C-24	Present Information with Filmstrips and Slides
C-25	Present Information with Films
C-26	Present Information with Audio Recordings
C-29	Present Information with the Chalkboard and Flip Chart
D-1	Establish Student Performance Criteria
D-2	Assess Student Performance: Knowledge
D-3	Assess Student Performance: Attitudes
D-4	Assess Student Performance: Skills
D-5	Determine Student Grades
D-6	Evaluate Your Instructional Effectiveness
E-5	Provide for Student Safety
E-6	Provide for the First Aid Needs of Students
E-8	Organize the Vocational Laboratory
E-9	Manage the Vocational Laboratory
F-3	Use Conferences to Help Meet Student Needs
F-5	Assist Students in Applying for Employment or Further Education
G-8	Work with Members of the Community
I -3	Develop an Active Personal Philosophy of Education
I -5	Obtain a Suitable Teaching Position

The National Association of Trade and Technical Schools (NATTS) is an educational trade association representing private postsecondary occupational schools. NATTS represents over 1,000 member schools in 45 states, the District of Columbia, and Puerto Rico.

NATTS schools offer over 100 different career training programs, most of which can be completed in less than two years. The training is intense, and students only take courses related to their occupational objectives. Classes are usually small, and hands-on training is a significant part of each student's education.

Accrediting Standards

To ensure excellence in educational standards and business ethics in the postsecondary trade and technical school industry, NATTS established an Accrediting Commission in 1966. The NATTS Accrediting Commission is an autonomous body of nine appointed commissioners, five from the private school sector and four public members. This commission is approved by the U.S. Department of Education.

Only those schools that have been in operation for two years, with educational goals that are primarily occupational, are eligible for NATTS membership. A school wishing to become accredited is visited by a team of experts. These experts evaluate educational objectives, admission and enrollment policies, course offerings, placement and completion rates, advertising policies, facilities, equipment, and faculty.

Accrediting standards for faculty require each instructor to have at least two years of practical experience. Teachers must also be trained to teach and able to demonstrate up-to-date technical knowledge. Each school must document these standards for each person in the school who is employed in an instructional or administrative capacity. Furthermore, each school must describe efforts to encourage self-improvement in the areas of instructional and technical knowledge, evaluation, and faculty development.

The NATTS-Recommended CBSD Program

Trade and technical school instructors are normally recruited and selected on the basis of their technical training and experience. Although these instructors are highly competent in their technical specialties, often they have not received instructor training.

NATTS has recognized, through its accreditation standards, the need for instructor training. NATTS has further recognized that there is a common core of instructional competencies needed by technical instructors, regardless of the technical area of instruction.

NATTS has therefore recommended an instructor training program for its members that consists of 21 modules (see p. 78), which were selected to provide the core of teaching skills needed in the areas of program planning and instructional planning, execution, evaluation, and management. As part of the NATTS commitment to an ongoing professional development process, three levels of recognition have been established.

To reach Level I, an instructor must successfully complete 16 PBTE modules, including 11 modules from the 21 recommended by NATTS. To reach Level II, the instructor must complete 9 modules beyond the Level I requirements (a total of 25). To reach Level III, an instructor must complete 15 modules beyond the Level I and II requirements (a total of 40).

NATTS has also made provision for official recognition of instructors who have completed the modules required for a given level of the NATTS-Recommended CBSD Program. Each instructor receives a Professional Achievement Award upon completion of each level of the program. The award is issued after the school has certified, via the official NATTS-CBSD transcript, that the instructor has successfully completed the required number of modules.

Depending on the policies of each member school, the award is recognized in a number of ways. Individual schools may use the award in making promotions or awarding growth points that lead to salary increases. Most important, however, program completion ensures that these technical instructors have demonstrated creative teaching skills.

CBSD Programs in NATTS Schools

Many different approaches to the CBSD program have been developed to meet the unique needs of various NATTS schools. Typically, a school that is implementing the program will present an overview of the CBSD program during the instructor's orientation. Key points might include the following:

- Review of the CBSD program goals
- Review of the National Center's *Student Guide,* which explains the PBTE/CBSD approach and materials
- Module walk-through
- Group activity that centers around the module
- Review of the NATTS transcript
- Review of the assessment criteria

After an instructor completes orientation, many schools require the completion of several modules (e.g., *Develop a Lesson Plan, Introduce a Lesson,* and *Summarize a Lesson*) during the first two weeks of employment. Then, during the first year of employment, the instructor may be required to complete at least Level I of the NATTS-Recommended CBSD Program. A designated staff member serves as resource person to the instructor throughout the program.

Modules in NATTS-Recommended CBSD Program

A-8	Develop a Course of Study
B-2	Develop Student Performance Objectives
B-3	Develop a Unit of Instruction
B-4	Develop a Lesson Plan
C-6	Guide Student Study
C-7	Direct Student Laboratory Experience
C-10	Introduce a Lesson
C-11	Summarize a Lesson
C-12	Employ Oral Questioning Techniques
C-13	Employ Reinforcement Techniques
C-14	Provide Instruction for Slower and More Capable Learners
C-15	Present an Illustrated Talk
C-16	Demonstrate a Manipulative Skill
C-17	Demonstrate a Concept or Principle
D-1	Establish Student Performance Criteria
D-2	Assess Student Performance: Knowledge
D-4	Assess Student Performance: Skills
D-5	Determine Student Grades
D-6	Evaluate Your Instructional Effectiveness
E-5	Provide for Student Safety
E-6	Provide for the First Aid Needs of Students

State of Nebraska
POSTSECONDARY TEACHER EDUCATION PROGRAM

In Nebraska, a performance-based postsecondary teacher education program has evolved from the collaborative efforts of three university teacher education departments and Nebraska's community colleges. The program was developed to meet the concern of postsecondary institutions that conventional teacher preparation courses were not responsive to the needs of their instructors. Incorporated in the program are teaching competencies specifically identified as being essential for instructors in the state's postsecondary institutions.

Two lists of competencies form the content for the total program. A series of 28 competencies (see p. 80) are recommended for the preservice training of prospective teachers. An additional 62 competencies are considered to be vital to proficiency in teaching. These two sets of competencies closely parallel many of the competencies upon which the National Center's modules are based.

A statewide system for the delivery of instruction for these teaching skills involves all the state's vocational-technical teacher education institutions. A unique feature of the delivery system is that it provides two basic options for participating preservice or inservice instructors.

In the first option, the instructor may take nine semester hours of conventional course work in education. The second option is the performance-based program, in which beginning postsecondary instructors are required to complete at least 14 of the first set of 28 competencies during the first year. During the second and third years, the instructor must master an additional 22 competencies from the prescribed 62 in order to become fully certificated.

Operation and administration of the program is a shared responsibility of the six campuses of the University of Nebraska. One university staff member has specific responsibility for managing the program, while faculty from all campuses serve as resource persons. A staff development coordinator at each of the cooperating postsecondary institutions is designated as the supervisor on site.

Modules Related to Nebraska's Preservice Competencies

A-8	Develop a Course of Study
B-1	Determine Needs and Interests of Students
B-2	Develop Student Performance Objectives
B-3	Develop a Unit of Instruction
B-4	Develop a Lesson Plan
B-5	Select Student Instructional Materials
B-6	Prepare Teacher-Made Instructional Materials
C-2	Conduct Group Discussions, Panel Discussions, and Symposiums
C-6	Guide Student Study
C-7	Direct Student Laboratory Experience
C-9	Employ the Project Method
C-10	Introduce a Lesson
C-11	Summarize a Lesson
C-15	Present an Illustrated Talk
C-16	Demonstrate a Manipulative Skill
C-17	Demonstrate a Concept or Principle
C-18	Individualize Instruction
C-20	Use Subject Matter Experts to Present Information
C-22	Present Information with Models, Real Objects, and Flannel Boards
C-23	Present Information with Overhead and Opaque Materials
C-29	Present Information with the Chalkboard and Flip Chart
D-1	Establish Student Performance Criteria
D-2	Assess Student Performance: Knowledge
D-4	Assess Student Performance: Skills
E-7	Assist Students in Developing Self-Discipline
F-2	Gather Student Data Through Personal Contacts
F-3	Use Conferences to Help Meet Student Needs
I-3	Develop an Active Personal Philosophy of Education

State of Arkansas
STAFF DEVELOPMENT AND CERTIFICATION PROGRAM

At present, Arkansas' CBSD program involves instructors in the 24 state-operated vocational-technical centers; it will in the future be offered to the state's secondary vocational teachers as well. The program of training and certification has three goals: (1) to improve the quality of vocational instruction, (2) to provide a systematic process of inservice teacher education, and (3) to foster competency-based vocational-technical training in the schools.

The certification program provides a career ladder of four levels:

1. Provisional instructor
2. Instructor
3. Senior instructor
4. Master instructor

All instructors entering the system are hired in and certificated as provisional instructors—no matter whether they possess a degree or not, no matter what degree they possess. The basic assumption is that the new instructor has no teaching knowledge or skill; however, degreed teachers can quickly demonstrate competence and gain promotion. Participation in the program is a condition of employment, and the newly hired instructor signs an acknowledgement of that fact.

The provisional instructor certificate is valid for one year and may be renewed twice. By the end of the first year, the instructor must complete 11 specified teacher education modules. To be eligible for the instructor certificate, 31 modules must be completed (26 required and 5 elective), and a month of technical work experience and a year of successful teaching at the provisional level are required.

The instructor certificate is issued for four years and is not renewable. Senior instructor certification requirements must be met during this four-year period: successful completion of 33 teacher education modules (22 required and 11 elective). Instructors who desire to remain at the senior instructor level may do so. In order to qualify for the next level, master instructor, an additional 36 modules must be completed. These are selected by the instructor's professional development committee.

Each school has a resident resource person (RRP) available to work with instructors. Typically, an RRP works with 20 instructors on a daily basis, assisting each individual with problems and helping to maintain progress. The RRP evaluates each instructor on each competency in the program. A field resource person (a teacher educator from a cooperating university) works closely with the school's RRP to assist and to monitor the PBTE program.

- Nondegreed teachers can apply the competencies achieved in the program to a university degree.
- The program provides a career ladder that is expected to help Arkansas' schools retain excellent teachers.
- Instruction and learning are self-paced and thus, convenient and efficient for on-the-job instructors.
- Assessment of all competencies is done in an actual teaching situation, usually with the instructor's own students.

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Titles of the National Center's Performance-Based Teacher Education Modules

Category A: Program Planning, Development, and Evaluation
A-1 Prepare for a Community Survey
A-2 Conduct a Community Survey
A-3 Report the Findings of a Community Survey
A-4 Organize an Occupational Advisory Committee
A-5 Maintain an Occupational Advisory Committee
A-6 Develop Program Goals and Objectives
A-7 Conduct an Occupational Analysis
A-8 Develop a Course of Study
A-9 Develop Long-Range Program Plans
A-10 Conduct a Student Follow-Up Study
A-11 Evaluate Your Vocational Program

Category B: Instructional Planning
B-1 Determine Needs and Interests of Students
B-2 Develop Student Performance Objectives
B-3 Develop a Unit of Instruction
B-4 Develop a Lesson Plan
B-5 Select Student Instructional Materials
B-6 Prepare Teacher-Made Instructional Materials

Category C: Instructional Execution
C-1 Direct Field Trips
C-2 Conduct Group Discussions, Panel Discussions, and Symposiums
C-3 Employ Brainstorming, Buzz Group, and Question Box Techniques
C-4 Direct Students in Instructing Other Students
C-5 Employ Simulation Techniques
C-6 Guide Student Study
C-7 Direct Student Laboratory Experience
C-8 Direct Students in Applying Problem-Solving Techniques
C-9 Employ the Project Method
C-10 Introduce a Lesson
C-11 Summarize a Lesson
C-12 Employ Oral Questioning Techniques
C-13 Employ Reinforcement Techniques
C-14 Provide Instruction for Slower and More Capable Learners
C-15 Present an Illustrated Talk
C-16 Demonstrate a Manipulative Skill
C-17 Demonstrate a Concept or Principle
C-18 Individualize Instruction
C-19 Employ the Team Teaching Approach
C-20 Use Subject Matter Experts to Present Information
C-21 Prepare Bulletin Boards and Exhibits
C-22 Present Information with Models, Real Objects, and Flannel Boards
C-23 Present Information with Overhead and Opaque Materials
C-24 Present Information with Filmstrips and Slides
C-25 Present Information with Films
C-26 Present Information with Audio Recordings
C-27 Present Information with Televised and Videotaped Materials
C-28 Employ Programmed Instruction
C-29 Present Information with the Chalkboard and Flip Chart

Category D: Instructional Evaluation
D-1 Establish Student Performance Criteria
D-2 Assess Student Performance: Knowledge
D-3 Assess Student Performance: Attitudes
D-4 Assess Student Performance: Skills
D-5 Determine Student Grades
D-6 Evaluate Your Instructional Effectiveness

Category E: Instructional Management
E-1 Project Instructional Resource Needs
E-2 Manage Your Budgeting and Reporting Responsibilities
E-3 Arrange for Improvement of Your Vocational Facilities
E-4 Maintain a Filing System
E-5 Provide for Student Safety
E-6 Provide for the First Aid Needs of Students
E-7 Assist Students in Developing Self-Discipline
E-8 Organize the Vocational Laboratory
E-9 Manage the Vocational Laboratory
E-10 Combat Problems of Student Chemical Use

Category F: Guidance
F-1 Gather Student Data Using Formal Data-Collection Techniques
F-2 Gather Student Data Through Personal Contacts
F-3 Use Conferences to Help Meet Student Needs
F-4 Provide Information on Educational and Career Opportunities
F-5 Assist Students in Applying for Employment or Further Education

Category G: School-Community Relations
G-1 Develop a School-Community Relations Plan for Your Vocational Program
G-2 Give Presentations to Promote Your Vocational Program
G-3 Develop Brochures to Promote Your Vocational Program
G-4 Prepare Displays to Promote Your Vocational Program
G-5 Prepare News Releases and Articles Concerning Your Vocational Program
G-6 Arrange for Television and Radio Presentations Concerning Your Vocational Program
G-7 Conduct an Open House
G-8 Work with Members of the Community
G-9 Work with State and Local Educators
G-10 Obtain Feedback about Your Vocational Program

Category H: Vocational Student Organization
H-1 Develop a Personal Philosophy Concerning Vocational Student Organizations
H-2 Establish a Vocational Student Organization
H-3 Prepare Vocational Student Organization Members for Leadership Roles
H-4 Assist Vocational Student Organization Members in Developing and Financing a Yearly Program of Activities
H-5 Supervise Activities of the Vocational Student Organization
H-6 Guide Participation in Vocational Student Organization Contests

Category I: Professional Role and Development
I-1 Keep Up-to-date Professionally
I-2 Serve Your Teaching Profession
I-3 Develop an Active Personal Philosophy of Education
I-4 Serve the School and Community
I-5 Obtain a Suitable Teaching Position
I-6 Provide Laboratory Experiences for Prospective Teachers
I-7 Plan the Student Teaching Experience
I-8 Supervise Student Teachers

Category J: Coordination of Cooperative Education
J-1 Establish Guidelines for Your Cooperative Vocational Program
J-2 Manage the Attendance, Transfers, and Terminations of Co-op Students
J-3 Enroll Students in Your Co-op Program
J-4 Secure Training Stations for Your Co-op Program
J-5 Place Co-op Students on the Job
J-6 Develop the Training Ability of On-the-Job Instructors
J-7 Coordinate On-the-Job Instruction
J-8 Evaluate Co-op Students' On-the-Job Performance
J-9 Prepare for Students' Related Instruction
J-10 Supervise an Employer-Employee Appreciation Event

Category K: Implementing Competency-Based Education (CBE)
K-1 Prepare Yourself for CBE
K-2 Organize the Content for a CBE Program
K-3 Organize Your Class and Lab to Install CBE
K-4 Provide Instructional Materials for CBE
K-5 Manage the Daily Routines of Your CBE Program
K-6 Guide Your Students Through the CBE Program

Category L: Serving Students with Special/Exceptional Needs
L-1 Prepare Yourself to Serve Exceptional Students
L-2 Identify and Diagnose Exceptional Students
L-3 Plan Instruction for Exceptional Students
L-4 Provide Appropriate Instructional Materials for Exceptional Students
L-5 Modify the Learning Environment for Exceptional Students
L-6 Promote Peer Acceptance of Exceptional Students
L-7 Use Instructional Techniques to Meet the Needs of Exceptional Students
L-8 Improve Your Communication Skills
L-9 Assess the Progress of Exceptional Students
L-10 Counsel Exceptional Students with Personal-Social Problems
L-11 Assist Exceptional Students in Developing Career Planning Skills
L-12 Prepare Exceptional Students for Employability
L-13 Promote Your Vocational Program with Exceptional Students

Category M: Assisting Students in Improving Their Basic Skills
M-1 Assist Students in Achieving Basic Reading Skills
M-2 Assist Students in Developing Technical Reading Skills
M-3 Assist Students in Improving Their Writing Skills
M-4 Assist Students in Improving Their Oral Communication Skills
M-5 Assist Students in Improving Their Math Skills
M-6 Assist Students in Improving Their Survival Skills

Category N: Teaching Adults
N-1 Prepare to Work with Adult Learners
N-2 Market an Adult Education Program
N-3 Determine Individual Training Needs
N-4 Plan Instruction for Adults
N-5 Manage the Adult Instructional Process
N-6 Evaluate the Performance of Adults

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The Resource Person's Guide to Using Performance-Based Teacher Education Materials
The Implementation Guide for Performance-Based Teacher Education & Competency-Based Staff Development Programs
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For information regarding availability and prices of these materials contact—AAVIM, American Association for Vocational Instructional Materials, 120 Driftmier Engineering Center, The University of Georgia, Athens, Georgia 30602, (404) 542-2586.

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